IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Sydney Water Corporation Operational Audit 2006/07

Report to the Minister

Water — Compliance Report
December 2007

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1 Introduction and Overview

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) has completed its audit of Sydney Water Corporation's (Sydney Water's) compliance with the requirements of its Operating Licence. This audit covers the period from 1 July 2006 to 30 June 2007. IPART engaged GHD Pty Ltd to undertake the 2006/07 Operational Audit of Sydney Water.

The purpose of this report is to inform the Minister for Water Utilities of the audit findings, IPART's assessment of compliance and recommendations from these findings as well as from its review on obligations not subject to audit.

The 2006/07 audit is the first year that IPART has employed a risk based auditing regime. The IPART risk assessment process provides that only clauses assessed as having high risks associated with non-compliance are included in the audit scope. Other clauses are subject to IPART review, which requires Sydney Water to provide IPART with a statement of compliance together with evidence or an outline of compliance.

Appendix A sets out details of licence requirements and shows which requirements are subject to audit and which are subject to IPART review.

1.1 Overview of audit findings

In undertaking its audit review, the auditor examined Sydney Water's compliance with each of the obligations imposed on it through the Operating Licence set out in the IPART's risk-based audit procedure, and with the Ministerial Requirements related to these obligations.

Overall, the auditor found that Sydney Water had managed its resources to achieve predominantly full compliance with the Operating Licence, although some outcomes were assigned a high compliance.

Compliance with the parts of the 2005-2010 Operating Licence included in the scope for the 2006/07 audit period is summarised below.

- Part 3 – Water Quality

  Sydney Water achieved full compliance with respect to all the water quality requirements of the Operating Licence.

- Part 4 – Infrastructure Performance

  Sydney Water achieved full compliance for most infrastructure performance requirements. High compliance was assigned for the calculation and reporting requirements for levels of water leakage, and the achievement of specified response times for Priority 4 breaks/leaks.

- Part 7 – Environment Indicators and Management

  Full compliance was assigned for the metering component of this section of the Licence.

- Part 9 – Water Conservation and Demand Management

  Sydney Water achieved full compliance with the Demand Management components of the Operating Licence.

- Ministerial Requirements

  Sydney Water achieved full compliance for the Ministerial Requirement directing Sydney Water to install 40 flowmeters before 30 June 2007, and high compliance with the Ministerial Requirement that fourteen (14) water pressure zones be established by June 2007.

1.2 IPART's recommendations

IPART notes that the auditor made a number of recommendations for Sydney Water. It believes that Sydney Water should consider these recommendations and use them to guide its efforts to further improve its compliance performance over the next year.

IPART intends to follow up specific recommendations with Sydney Water in a number of areas, although it does not consider any recommendation warrants consideration by the Minister as a specific request for action by Sydney Water.

1.3 Structure of report

The following chapters explain the auditor's findings and recommendations in more detail, and provide IPART's comments in response to these findings, based on its attendance at audit meetings, its review and its understanding of the issues.

Chapter 2 explains the basis for, and scope of the audit review, and the process followed in undertaking it. Chapter 3 to 12 focus on Sydney Water's compliance with the obligations set out within key sections of its Operating Licence, including:

- Water quality
- Infrastructure performance
- Customer and consumer rights
- Complaint and dispute handling

- Environment indicators and management
- Water conservation and demand management
- Sydney Water's implementation of Memoranda of Understanding with other government agencies.

Please note that the sections entitled "Auditor's findings" and "Auditor's recommendations" in chapters where the operating licence obligations are subject to audit are direct quotes from the auditor's final report to the IPART. Only key recommendations are quoted in IPART's report. Further details on the auditor's findings and secondary recommendations can be found in the auditor's report, which is attached in Appendix B for information.

The sections entitled "IPART's review of obligations not subject to audit" list findings of IPART's desktop review, followed by IPART's comments on the review and/or the auditor's compliance assessment. Details of evidence resulting from IPART's review are tabled in Appendix C under the relevant Licence clause.

A copy of the Sydney Water 2006/07 Annual Compliance Report to IPART is included in Appendix D.

2 Audit Scope and Process

Sydney Water is a State Owned Corporation, wholly owned by the NSW Government. Its primary role is to manage potable water supply and sewage treatment (including assets) to protect public health and the environment for the benefit of Sydney and surrounding urban areas. These roles and responsibilities are derived from the *Sydney Water Act 1994* (the Act) and the Operating Licence issued to Sydney Water pursuant to Part 5 of the Act.

Part 12 of the Operating Licence requires IPART to undertake an Operational Audit of Sydney Water's performance against the requirements of the licence each year, and report its findings to the Minister. This audit covers the period from 1 July 2006 to 30 June 2007 (audit period) and is the seventh operational audit that IPART had conducted for Sydney Water Corporation. Section 33 of the *Sydney Water Act 1994* requires the Minister for Water Utilities to table the IPART audit report in both Houses of Parliament within one month of receiving the report.

2.1 Scope

In line with the scope defined in Part 12 of the Operating Licence, the auditor's review included assessing Sydney Water's:

- Compliance with the obligations in each of Part 3, 4, 7 and 9 (and any Schedules referred to in those Parts) of its Operating Licence, as set out in IPART's risk-based audit procedure.
- Compliance with any other matter required by the Operating Licence, the Sydney Water Act or administrative direction to be assessed or considered as part of the Annual Audit.
- Compliance with the directions of the Minister responsible for administering the provisions of the Act, following the 2005/06 Operational Audit (Ministerial Requirements). There were two Ministerial requirements resulting from the Operational Audit of Sydney Water Corporation 2005/06:

  1. I require that Sydney Water achieve the revised flowmeter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006. This entails the installation of 40 flowmeters before 30 June 2007 and installation of the remaining 28 flowmeters before 30 September 2008.
  2. Achieve creation of 14 larger pressure zones instead of the originally forecast 21 zones by June 2007 (with no reduction to water saving benefits or designated properties).

In undertaking the audit review, the auditor examined Sydney Water's compliance with its requirements for the 2006/07 audit period only.

Licence Sections dealing with Pricing, Licence authorisation and area of operation, and Liability issues had not been included in IPART's audit in the past. This practice has been continued for this audit.

As previously stated, this audit is the first time that IPART has adopted a risk-based approach to the operational audit of Sydney Water Corporation. The aim of this approach is to improve the effectiveness and efficiency in auditing of the utility without increasing the risk to the community served by Sydney Water. The benefits of this approach include targeting audit resources to areas of higher risk while reducing the overall burden of compliance on Sydney Water.

2.2 Process

IPART engaged GHD Pty Ltd to undertake the audit of licence requirements identified as higher risk areas in the IPART risk-based audit methodology for the period 1 July 2006 to 30 June 2007.

The auditor held an inception meeting with Sydney Water's Managing Director and other representatives on 19 September 2007. Both Sydney Water and the auditor generally adhered to agreed protocols throughout the audit. IPART's Secretariat attended all meetings and chaired the audit interviews between the auditor and Sydney Water Corporation. This allowed IPART to witness and gain first hand information on all audit processes and outcomes.

On completion of the audit interviews, the auditor provided Sydney Water with first and second drafts of the audit report, giving opportunity for Sydney Water to comment on the documents and to provide additional information where required. In finalising its report, the auditor had taken consideration of the comments provided.

The auditor has assessed and rated Sydney Water's compliance with the requirements of the Operating Licence according to the schedule set out in Table 2.1.

Table 2.1 Sydney Water Compliance Requirements

Compliance Grade	Description detail
Full Compliance	All requirements of the condition have been met.
High Compliance	Most requirements of the condition have been met with some minor technical failures or breaches.
Moderate Compliance	The major requirements of the condition have been met.
Low Compliance	Key requirements of the condition have not been met but minor achievements regarding compliance was not available to the auditor.
Non Compliance	The requirements of the condition have not been met.
Insufficient Information	Relevant, suitable or adequate information to make an objective determination regarding compliance was not available to the auditor.
No requirement	The requirement to comply with this condition does not occur within the audit period or there is no requirement for the utility to meet.

2.3 IPART's review of obligations not subject to Audit

IPART has adopted a risk-based approach to the audit of Sydney Water's compliance with the requirements of its Operating Licence in 2006/07. For those requirements classed as low risk under the risk-based framework IPART received a statement signed by the Chairman and Managing Director of Sydney Water certifying compliance with Licence obligations not subject to audit. IPART also considered evidence of compliance supplied by Sydney Water. A compliance report incorporating these details is included at Appendix C.

3 Water Quality

3.1 Auditor's findings

Drinking Water Quality – Standards

Sydney Water obtained **Full Compliance** with respect to the quality of supplies of treated drinking water to customers. The water quality supplied is generally, of an excellent standard and complies with the health related requirements of the Australian Drinking Water Guidelines (1996), the current Australian Drinking Water Guidelines (2004) and the aesthetic related requirements of NSW Health and the Minister. A summary of results for a key indicator is shown in Table 5-1 of GHD's audit report, which is included in Appendix B.

Drinking Water Quality - Monitoring

Sydney Water has prepared an Annual Drinking Water Quality Monitoring Plan for the water supply systems to monitor health-related and aesthetic-related water quality parameters and to demonstrate compliance with the Guidelines. The Plan has been prepared in accordance with the Licence requirements and has been endorsed by NSW Health.

Sydney Water obtained **Full Compliance** with respect to considering and including the concepts of risk minimisation practices and systems management in the operation of its water supply.

Sydney Water obtained **Full Compliance** with respect to monitoring in accordance with the Annual Drinking Water Quality Monitoring Plan. Sydney Water maintains an effective system of quality assurance for monitoring, sampling, testing and reporting on the Plan.

Drinking Water Quality – Reporting

Sydney Water obtained **Full Compliance** for the preparation of reports on the results of water quality monitoring and water quality improvement. Quarterly reports of monitoring results were prepared and are available on the Sydney Water website.

Drinking Water – Planning

Sydney Water prepared a Five Year Drinking Water Quality Management Plan 2005-2010 in November 2005. Sydney Water obtained **Full Compliance** for the preparation of a report in 2006 – 2007 on the implementation of the Plan, and Full Compliance for reporting on actions that have been identified in the Plan. No further improvements to the Plan itself were identified in the report. Because of the occurrence of an algal bloom in Warragamba Reservoir, Sydney Water advises that an in-depth review of the risk and requirements for control will be carried out in the next audit period, and that this may lead to improvements in the Water Filtration Plant systems for treating possible toxins and taste and odour compounds that can result from such blooms.

Drinking Water – Incident Management

Sydney Water has prepared a Drinking Water Quality Incident Management Plan.

Other Grades of Water

Sydney Water obtained **Full Compliance** with the requirements for "supply of other grades of water" for the Rouse Hill recycled water scheme, and other schemes, with the most critical parameters complying with requirements and a continuous program of improvement in place. Cross connections had been identified in previous years and Sydney Water has carried out an intensive inspection program to eliminate cross connections; no further cross connections were identified in 2006 – 2007.

3.2 Auditor's recommendations

The auditor made no primary recommendations in relation to this area.

3.3 IPART's review of obligations not subject to audit

Sydney Water advised that it had prepared and submitted the Drinking Water Quality Monitoring Plan for 2007/08 and that NSW Health had accepted this Plan.

Sydney Water also advised that it had complied with the Incident Management requirements of the Licence.

3.4 IPART's comments

Sydney Water achieved an excellent standard with the quality of drinking water supplied to customers throughout 2006/07, and had complied with the health related requirements of the current Australian Drinking Water Guidelines (ADWG 2004) and the aesthetic related requirements specified by NSW Health and the Minister.

Sydney Water has a cooperative working relationship with both NSW Health and the Sydney Catchment Authority (SCA). An Incident/Event notification system involving NSW Health, the SCA and Sydney Water keeps all three organisations updated on all water quality events.

As Sydney Water's involvement in recycling continues to expand, it raises the need to establish and apply relevant water quality standards. IPART supports the auditor's secondary recommendation that Sydney Water consult with NSW Health to determine the extent to which it needs to comply with the new Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006. IPART will monitor Sydney Water's progress in this matter.

Recent occurrences of blue green algae bloom in the Warragamba Reservoir emphasize the need to assess whether Sydney Water's hazard identification and risk assessment measures are capable of identifying the potential for any problem occurring and whether Sydney Water is adequately prepared for dealing with the issue. IPART notes that the occurrence of algal bloom in Warragamba Reservoir extended beyond this audit period. IPART agrees with the auditor that diligent and active management should be at the fore of Sydney Water's operations and be the subject of continuous improvement programs. Sydney Water advises that an in-depth 'catchment to tap' risk analysis will be carried out in collaboration with Sydney Catchment Authority and in consultation with NSW Health in the next audit period. The auditor recommended that this review include an in-depth assessment of the adequacy of Sydney Water's hazard assessment and risk management processes for identifying and establishing management strategies for such issues. IPART will monitor Sydney Water's progress in this matter.

4 Infrastructure Performance

4.1 Auditor's findings

Sydney Water achieved **Full Compliance** with the Water Pressure Standard requiring no more than 15,000 properties to be affected in a financial year. Sydney Water reported 1,094 properties as experiencing a water pressure failure in 2006/07. This is an improvement over the last two years where 2,860 (2004/05) and 2,540 (2005/06) properties were affected.

Sydney Water achieved **Full Compliance** with the Water Continuity Standard requiring no more than 35,000 properties be affected by an "unplanned water interruption" exceeding five hours and no more than 32,000 properties be affected by a "planned and warned" interruption exceeding five hours:

> There were a total of 29,592 properties affected by the 507 unplanned shut down events that exceeded five hours, this is below the limit specified (compared to 19,214 properties in 2004/05 and 27,805 in 2005/06). The increase in unplanned water interruptions is attributable to the Operating Licence requirement to stop loss of water within specified timeframes (leading to increasing outage durations).
>
> There were a total of 17,292 properties affected by 169 planned shut down events that exceeded five hours, this is below the limit specified (compared with 8,527 properties in 2004/05 and 14,220 in 2005/06). The increase in planned water interruptions is attributable to the increasing emphasis on water main renewal and leakage reduction strategies.

Sydney Water achieved **Full Compliance** with the requirement for Sewage Overflows on Private Property for no more than 25,000 properties (other than public properties) to experience an Uncontrolled Sewage Overflow in dry weather. Sydney Water reported 24,924 uncontrolled sewage overflows on private properties in dry weather (compared to 21,462 properties in 2004/05 and 22,572 in 2005/06). While part of this increase is attributable to an increase in property density, should this trend continue during the 2007/08 licence year, Sydney Water has the potential to exceed this standard and there is a need to consider revision of the chosen property density limit in their choke management strategy.

Clauses 4.8, 4.9 and 4.10, relating to asset management, had **No Requirement** for 2006/07.

Sydney Water is required to meet a target leakage rate of 105 ML/d by 30 June 2009 and, therefore, there is **No Requirement** for 2006/07. It is noted, however, that Sydney Water has achieved significant reductions in leakage, from a rate of 188 ML/d in 2002/03 to 121.0 ML/d in 2006/07 and that this reduction is tracking the long-term trend needed for achieving the target.

Sydney Water achieved **High Compliance** with the calculation and reporting requirements for levels of Water leakage.

Sydney Water achieved **Full Compliance** with the requirement for providing Reports related to water leakage on:

- progress in installing, and the future installation program for, bulk water meters
- progress in creating, and the future creation program for, water pressure control zones
- the number of bursts, breaks or leaks and the time taken to repair these, and
- the programs for water main and reservoir zone inspections and the program for rehabilitation of reservoir zones.

Sydney Water achieved **Full Compliance** with all requirements for achieving specified Response time(s) for water main breaks except clause 4.13.1 (c) – criteria 2.

Sydney Water obtained **High Compliance** with 4.13.1 (c) criteria 2—Priority 4 breaks/leaks requiring 100 per cent of jobs to be attended to within 5 days; Sydney Water obtained 96 per cent (this priority is subject to clause 4.13.4).

Sydney Water obtained **Full Compliance** with the first stage of the revised Ministerial requirement on flow meter installation, entailing the installation of 40 flow meters before 30 June 2007. Sydney Water installed 43 flow meters.

Sydney Water obtained a **High Compliance** with the Ministerial requirement that 14 water pressure control zones be established by June 2007. Sydney Water achieved installation of 12 pressure control zones by June 2007 and completed the final two prior to the date of the audit interview. It is the auditor's opinion that the delay in completing the final two zones was justified and since compliance was achieved only a short time after that originally required, no recommendations are proposed.

Sydney Water obtained **Full Compliance** with the Ministerial requirement to 'restart the clock' on recording the response time for water main breaks where the priority is amended.

4.2 Auditor's recommendations

- R4.1 Sydney Water analyse the extent of work it is undertaking under the Choke Management Strategy, and the corresponding levels of risk in failing to ensure future compliance with the sewage overflow standard, and report to IPART by 31st March 2008 on its findings in the context of the (2006) Proposed System Performance Standard.
- R4.2 Sydney Water clarifies with IPART the ambiguity between 'Response Time to Water Main Breaks' clauses (vis. Clauses C4.13.1 (c2) and 4.13.4) and includes the outcome in its Monitoring and Reporting Protocol.

4.3 IPART's review of obligations not subject to audit

Sydney Water reported that it is on track to meet the 30 June 2009 leakage target of 105ML per day as required by the Operating Licence.

Sydney Water also advised that it had complied with requirements relating to system performance reporting, system performance and service quality indicators, leakage reporting and priority sewerage.

4.4 IPART's comments

Sydney Water achieved full compliance with System Performance Standards related to water pressure, continuity and sewerage overflow. IPART noted the increasing trend on uncontrolled sewage overflows on private properties in dry weather, and agrees with the auditor that future compliance is difficult to predict.

In regard to the auditor's first recommendation, IPART is currently reviewing Sydney Water's system performance standards. As part of this review, IPART intends to discuss with Sydney Water strategies for ensuring future compliance with the sewage overflow standard. In IPART's view, these should include the cost-benefit for each option and the corresponding levels of risk in failing to meet the standard. A separate March 2008 report on the sewerage overflow standard is therefore not required.

The auditor awarded high compliance in regards to achieving specified response time for water main breaks. IPART noted that there has been improvement in response time compared to the period 2005/06. Moreover, the requirements of Clause 4.13.4 need to be considered in addition to those of Clause 4.13.1 in making an overall assessment. In IPART's assessment of this requirement, it regards Sydney Water's performance as not significantly different to full compliance.

In regard to the auditor's second recommendation, IPART recognises that there is some ambiguity in clause 4.13. IPART intends to clarify compliance with clause 4.13 and amend the compliance section of the Monitoring and Reporting Protocol to assist compliance assessment in future audits.

Although Sydney Water is progressing towards its 105ML/day water leakage reduction target by 30 June 2009, it has indicated that, for technical reasons, it may not be able to report this target by the due date. IPART intends to clarify this matter with Sydney Water.

The 2006/07 audit also assessed Sydney Water's compliance with two Ministerial Requirements. Sydney Water achieved full compliance for the Ministerial requirement on flow meter installation and high compliance with the Ministerial Requirement regarding the completion of 14 pressure zones by June 2007. IPART noted the auditor's findings that delays were incurred due to difficulties in installing large main valves and the need to maintain customer supplies, and approves the assignment of high compliance in this instance.

Sydney Water has complied with the recommendation from the 2005/06 operational audit to review and to advise IPART on the original project delivery plan and timetable for the Priority Sewerage Program. Sydney Water reported that it is on track to meet targets in Operating Licence clause for Priority Sewage Program. IPART will monitor Sydney Water's progress on this matter.

5 Customer and Consumer Rights

5.1 IPART's review of obligations not subject to audit

Sydney Water provided evidence that it had addressed key recommendations and some of the secondary recommendations from the 2005/06 operational audit.

5.2 IPART's comments

This section of the Operating Licence was subject to IPART's review for this audit. Sydney Water advised that it had complied with the customer and consumer rights requirements of the Operating Licence. Further details of IPART's review can be found in Appendix C.

6 Complaint and Dispute Handling

6.1 IPART's review of obligations not subject to audit

Sydney Water reported in its Operating Licence Compliance Report 2006/07 that it had complied with the complaint and dispute handling requirements of the Licence. Details of evidence provided to IPART are set out in Appendix C.

6.2 IPART's comments

Operating Licence Clauses 6.1, 6.2 and 6.3 are subject to IPART's review for this audit. Sydney Water had provided IPART with a compliance report signed by its Chairman and Managing Director stating compliance with each of these clauses (copy of Sydney Water 2006/07 Compliance Report is attached in Appendix D).

7 Environment – Indicators and Management

7.1 Auditor's findings

Sydney Water provided a copy of a briefing note to the Minister and report entitled "Pilot Metering Project Multi-Unit Individual Cold Water Metering Progress Report – 8 September 2006".

Sydney Water indicated that it had progressed in relation to the implementation of the plan. Further discussions can be found in Section 6.4.1 of GHD's audit report, which is included in Appendix B.

Other requirements in complying with 'Environmental Indicators and Management (vis Part 7 of the Operating Licence) had been audited in the previous year.

7.2 Auditor's recommendations

The auditor made no recommendation in relation to this area.

7.3 IPART's review of obligations not subject to audit

Sydney Water had reported Schedule 3 Environmental Indicators of the Operating Licence in the required manner (Operating Licence clause 7.1). Data reported and comments on performance for each indicator showed that Sydney Water had considered the auditor's comments from last year. In 2006/07, Sydney Water has provided more historical data for some performance indicators than had been provided during the 2005/06 audit. It is expected that the associated indicators will gradually establish trends that can provide a basis for assessing Sydney Water's on-going performance in their respective areas.

Sydney Water had maintained certification of its Environmental Management System to AS/NZS ISO 14001:2004. There were no non-conformances over the last 12 months from EMS external audits. The current certification expires on 3 May 2008. Sydney Water had fulfilled its operating licence obligations in 2006/07 with regards to reviewing its Environmental Plan, posting the 2006-2011 Environmental Plan on the Sydney Water website, and reporting to IPART by 1 September 2007 on its progress for the previous financial year in meeting the Environmental Plan.

7.4 IPART's comments

Sydney Water had provided IPART with a compliance report setting out compliance with Schedule 3 – environmental performance indicators, and environment management.

Generally, the compliance report on Schedule 3 Environmental Performance Indicators provided a good overview of Sydney Water's progress in each area. These indicators highlight potential for improvement. Sydney Water has provided evidence of demonstrated efforts in establishing appropriate strategies to address each and every issue, showing improvement in its environmental management aspect.

Although there is no requirement for the audit period of 2006/07 for potable water use targets (Licence clause 7.3), Sydney Water has demonstrated positive progress towards the targets for June 2009 in respect to reducing potable water use by 80 per cent for Malabar, North Head and Bondi, ensuring all sewage treatment plants use at least 85 per cent recycled water for treatment processes, and undertaking potable water efficiency audits at all sewage treatment plants and implementing appropriate findings under a water conservation plan.

8 Water Conservation and Demand Management

8.1 Auditor's findings

Water Conservation Target

The Water Conservation Target is not due for review in the 2006/07 audit, which has adopted a risk-based approach.

Demand Management Strategy

Overall, Sydney Water continued to demonstrate a high level of commitment to water conservation and demand management, having implemented and continued to plan programs and activities of a high international standard. Sydney Water's workforce and business processes were well versed on water conservation and demand management. This understanding was evident in its Corporate Plan (2006-2011); Sustainability Division Plan; Output/Actions and Responsibilities (2007/08); Environmental Management System (EMS) List of Significant Environmental Impacts 2006, and alignment of these plans with the Sydney Metropolitan Water Plan to achieve Full Compliance for the Demand Management components of the Operating Licence.

The Water Conservation and Recycling Implementation Report (WCRIR) for 2006/07 demonstrated improving performance against the water conservation target (although not part of this year's audit as discussed above). Some 57 GL of potable water was saved in 2006/07, with consumption at 328 LCD corresponding to an estimated demand of 326 LCD including reasonable adjustments for the effects of weather on water usage against the 2011 target of 329 LCD.

Sydney Water is therefore well on track to achieving the water conservation target despite concerns raised in previous years. It is noted the Operating Licence prior to 2005/06 required that compliance with the water conservation target should take account of "an average year", and this was interpreted to mean that the assessment of compliance against the water conservation target should be modified to eliminate the impact of water restrictions for periods, when such restrictions were in operation. The current Operating Licence makes no mention of the "average year" nor does it contain any requirement to modify assessment of compliance against the water conservation target to take effect of water restrictions. Although not part of the 2006/07 audit, progress towards the water conservation target (in Section 9.1of the Operating Licence), should be assessed to include climate correction but exclude any

correction for the impact of water restrictions on water demand with achieved performance as reported above. The demonstrated significant progress towards the 2011 consumption target of 329 LCD (climate corrected) alleviates potential risks of not meeting the target discussed in the 2005/06 audit report.

It is further noted that Sydney Water has continued to make significant water savings in addition to the effects from water restrictions. An estimated consumption of 389 LCD is reported in the WCRIR for 2006/07 excluding the effects of water restrictions (albeit not a licence requirement). This represents a 43% improvement on potable water savings compared to 2005/06, which attained 400 LCD without restrictions.

Sydney Water's Draft Decision Support Manual review is to be finalised in December 2007 and the manual will begin to be rolled out to staff in 2008 following revision based on a number of pilot applications of the Manual, including the South West Growth Centre Area Plan and the Warriewood System Plan. Sydney Water's planners, environmental and communications teams have participated in the pilot applications together with Sydney Water's consultants involved in integrated water management and water conservation studies. The implementation of Sydney Water's Decision Support Manual will provide a consistent approach to the development of sustainable water servicing strategies and will consolidate Sydney Water's commitment to giving due consideration to demand side management in its future provision of services.

Reducing Discharges

Reducing Discharges is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Water Conservation rating and labelling

Water Conservation rating and labelling is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Review of Part 9 of Licence

Review of Part 9 licence is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Minister's Requirements

Minister's Requirements are not for review in the 2006/07 audit, which has adopted a risk-based approach.

8.2 Auditor's recommendations

The auditor made no primary recommendations in relation to this area.

8.3 IPART's review of obligations not subject to audit

In progressing towards meeting the 2010/11 water conservation target of 329 litres per capita per day, Sydney Water has provided details on its implementation of a range of strategies covering residential, business, leak detection and recycled water programs, as well as its development and implementation of regulatory measures to support the sustainable use of water resources, including pricing reforms, outdoor water saving measures, Water Efficiency Labelling and Standards, and Building Sustainability Index.

Sydney Water had carried out five pilot programs in 2006/07 as well as participated in collaborative research with a number of industry associations and centres of excellence.

Sydney Water has provided details on its implementation of a range of schemes including recycling water from sewage treatment plants to supplement demand for industrial, domestic and irrigation applications.

8.4 IPART's comments

Sydney Water achieved full compliance with the audited water conservation and demand management requirements for 2006/07, and demonstrated that it is on track to meet the water conservation target of 329 litres per capita per day by 2010/11. The auditor attributes this commendable performance to Sydney Water's efficient Demand Management Strategy incorporating adaptive management and a continuous improvement planning cycle, as well as its on-going research into various opportunities to supplement demand for drinking water and the continuation of water restrictions.

The risk-based approach for the 2006/07 operational audit had subjected some Operating Licence clauses to IPART's review, comprising Section 9.1 – water conservation target, Section 9.3 – reducing discharges, and Section 9.4 – water conservation rating and labelling. Sydney Water has provided IPART with a compliance report signed by its Chairman and Managing Director stating compliance in these areas.

Sydney Water has demonstrated continuous efforts and results in implementing water conservation and recycling strategies to fulfil its obligations under NSW Government's 2006 Metropolitan Water Plan, which aims to continue a secured supply of water that can meet the needs of Sydney.

9 Sydney Water's Implementation of Memoranda of Understanding with Other Government Agencies

9.1 IPART's review of obligations not subject to audit

The MoU with EPA has been updated to reflect the broadened role of the Department of Environment and Conservation (DEC). Both parties signed the revised MoU on 30 June 2006.

In April 2007 the Department of Environment and Conservation (DEC) took on a range of new responsibilities and changed its name to the Department of Environment and Climate Change (DECC).

Sydney Water prepared and signed off a new Memorandum of Understanding with NSW Health in December 2005 for the term of the current Operating Licence. The MoU clearly defines the roles, responsibilities and the working relationship between NSW Health and Sydney Water.

The Strategic Liaison Group (SLG) and Joint Operational Group (JOG) meetings are routinely held to discuss drinking water quality issues.

Sydney Water and WAMC (represented by the then Department of Natural Resources) signed a new MoU on 13 March 2007. The new MoU accurately reflects the nature of the relationship between WAMC and Sydney Water. However, references to the Department of Natural Resources in the MoU have been superseded.

9.2 IPART's comments

Operating Licence clause 12.2.1(b) – Sydney Water's implementation of any Memorandum of Understanding – is subject to IPART's review for the period of 2006/07.

Sydney Water had advised its compliance with this section of the Licence in the 2006/07 Annual Compliance Report to IPART dated 25 September 2007. Sydney Water demonstrated how it implemented its MoUs in the Folios of Progress Report to IPART dated 28 September 2007. Further details of IPART's review are included in Appendix C, under evidence of compliance for clause 12.2.1 (b).

Appendices

A Audit Scope for Sydney Water Corporation's Operational Audit in 2006/07

Licence Clause	Description	2006/07 audit scope
3	WATER QUALITY	
3.1	Drinking Water Quality – Standards	Audit (clauses 3.1.1 and 3.1.3)
3.2	Drinking Water Quality – Monitoring	Desktop (clauses 3.2.1 and 3.2.2)
3.3	Drinking Water Quality – Reporting	Audit (clauses 3.3.1 to 3.3.3)
3.4	Drinking Water – Planning	Audit (only clause 3.4.4)
3.5	Drinking Water – Incident Management	Desktop (clauses 3.5.1 to 3.5.4)
3.6	Other Grades of Water	Audit (only clause 3.6.1)
4	INFRASTRUCTURE PERFORMANCE	
4.4	Compliance with Performance Standards	Audit
4.5	Reporting on System Performance Standards	Desktop (clause 4.5.1 to 4.5.4)
4.6	Review of System Performance Standards	Desktop (only clause 4.6.4)
4.7	Service Quality and System Performance Indicators	Desktop (4.7.1, 4.7.3 & 4.7.4)
4.8	Asset Management Obligation	Nor in operation audit scope as subject to separate audit.
4.9	Reporting on Asset Management System	No Requirement
4.10	Auditing the Asset Management System	No Requirement
4.11	Water Leakage	Audit (only clause 4.11.2)
		Desktop (clauses 4.11.1 & 4.11.3)
4.12	Reports Related to Water Leakage	Audit (only clause 4.12.1)
		Desktop (clauses 4.12.2 to 4.12.4)
4.13	Response Time for Water Mains Breaks	Audit (clauses 4.13.1, 4.13.3 & 4.13.4)
4.14	Priority Sewerage	Desktop (clauses 4.14.1 to 4.14.3)
5	CUSTOMER AND CONSUMER RIGHTS	
5.1	Customer Contract	Desktop (clauses 5.1.4, 5.1.7, 5.1.9 & 5.1.10)
5.2	Consumers	Desk-top
5.3	Code of Practice and Procedure on Debt and Disconnection	Desktop (clauses 5.3.1 to 5.3.4)
5.4	Customer Councils	Desktop (clauses 5.4.1 to 5.4.4, 5.4.6 to 5.4.16)
5.5	Customer Service Indicators	Desktop (clauses 5.5.1 to 5.5.3)

6	COMPLAINTS AND DISPUTE HANDLING	
6.1	Internal Dispute Resolution Process	Desktop (clauses 6.1.1 to 6.1.4)
6.2	External Dispute Resolution Scheme	Desktop (clauses 6.2.1, 6.2.3 to 6.2.7)
6.3	Complaints to Other Bodies	Desktop (clauses 6.3.1 to 6.3.3)
7	ENVIRONMENT – INDICATORS AND MANAGEMENT	
7.1	Environmental Indicators	Desktop (clauses 7.1.1 to 7.1.4)
7.2	Environmental Management	Desktop (clauses 7.2.1, 7.2.2, 7.2.4 to 7.2.7)
7.3	Potable Water Use	Desktop (clauses 7.3.1 to 7.3.4)
7.4	Metering of Individual Units	Audit (only clause 7.4.1(b))
8	PRICING	
8	Pricing	Desktop
9	WATER CONSERVATION AND DEMAND MANAGEMENT	
9.1	Water Conservation Target	Desktop (clauses 9.1.1 & 9.1.3)
9.2	Demand Management Strategy	Audit (clauses 9.2.1 to 9.2.3)
9.3	Reducing Discharges	Desktop (9.3.1 to 9.3.3)
9.4	Water Conservation Rating and Labelling	Desktop (clauses 9.4.1 & 9.4.2)
9.5	Review of Part 9 of Licence	No Requirement
10	Licence Authorisation and Area of Operations	
10.1	What the Licence Authorises and Regulates	Desktop
10.2	Powers Not Limited	Desktop
10.3	Area of Operations	Desktop
10.4	Connections of Services	Desktop
10.5	Non-exclusive Licence	Desktop
11	Liability Issues	
11.1	Contracting out	Desktop
11.2	Damage and Compensation to Persons	Desktop
11.3	Competitive Neutrality	Desktop
12	Operational Audits of this Licence	
12.2.1(b)	Sydney Water's Implementation of any Memorandum of Understanding	Desktop

B GHD Final Report – Sydney Water Corporation Operational Audit 2006/07

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

SYDNEY WATER CORPORATION OPERATIONAL AUDIT 2006/2007

December 2007

GHD CLIENTS | PEOPLE | PERFORMANCE

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Abbreviations

Acronym	Description
ADWG (1996)	Australian Drinking Water Guidelines (1996), National Health and Medical Research Council and Agriculture and Resource Management Council
ADWG (2004)	Australian Drinking Water Guidelines (2004), National Health and Medical Research Council and Agriculture and Resource Management Council
ACCESS	Automated Corporate Customer Enquiry Service System
Act	*Sydney Water Act, 1994*
ANZECC	Australia and New Zealand Environment and Conservation Council
AS	Australian Standard
ARMCANZ	Agriculture and Resource Management Council of Australia and NZ
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
CTTT	Consumer, Trader and Tenancy Tribunal
DEC	Department of Environment and Conservation
DNR	Department of Natural Resources
DWOS	Dry Weather Overflow Strategy
E.Coli	Escherichia coli
EDC	*Every Drop Counts*
CHJY	CHJY Freshwater is a joint venture between CH2M Hill Australia Pty Ltd. and John Young (Kelvinhaugh) Pty Ltd.
EMS	Environmental Management System
EPA	Environmental Protection Authority
EPI	Environmental Performance Indicator
ESD	Ecologically Sustainable Development
EUM	End Use Model
EWON	Energy and Water Ombudsman NSW
GHD	GHD Pty Ltd
GIS	Geographical Information Systems
GL	Gigalitres
GWh	Gigawatt hour(s)
HACCP	Hazard Analysis and Critical Control Points

Acronym	Description
IICATS	Integrated Instrumentation, Control, Automation and Telemetry System
ILI	Infrastructure Leakage Index
IPART	Independent Pricing and Regulatory Tribunal (NSW)
ISF	Institute for Sustainable Futures
ISO	International Standards Organisation
JOG	Joint Operational Group
kL	Kilolitre
km	Kilometre
KPI	Key Performance Indicator
Lcd	Litres per capita per day
M&R	Monitoring and Reporting
MSDS	Material safety Data Sheet
ML	Megalitre (1 million litres)
MOD	Modified – Modified from ISO 10002:2004, Quality management—Customer satisfaction—Guidelines for complaints handling
MOU	Memorandum of Understanding
NATA	National Analytical Testing Authority
NHMRC	National Health and Medical Research Council
NSW Health	NSW Department of Health
NTU	Nephelometric turbidity unit
OLCR	Operating Licence Compliance Report
pa	Per annum
pH	A measure of the acidity or basicity of a solution – literally 'potential of Hydrogen'
QA	Quality Assurance
RIAMP	Reliability Improvement and Modernisation Program
SCA	Sydney Catchment Authority
SLG	Strategic Liaison Group
SOP	Standard Operating Procedure
SPS	System Performance Standard
STP	Sewage Treatment Plant

Acronym	Description
SWC	Sydney Water Corporation
SWEMS2004	Sydney Water Environmental Management System 2004
Sydney Water	Sydney Water Corporation
TBA	To Be Advised
WAMC	Water Administration Ministerial Corporation
WAMS	Water Asset Management System
WELS	Water Efficiency Labelling Scheme
WC&RIR	Water Conservation and Recycling Implementation Report
WFP	Water Filtration Plant
WSAA	Water Services Association of Australia

Glossary/Definitions

GENERAL TERMS AND DEFINITIONS

Term	Meaning
Act	*Sydney Water Act, 1994*.
Area of Operations	As specified in section 10(1) of the Act and described in Part 10 of the Operating Licence.
Audit period	1 July 2006 to 30 June 2007.
Auditor	GHD Pty Ltd.
Bulk Water	Water supplied by the SCA to Sydney Water (under the Bulk Water Supply Agreement) and to customers other than Sydney Water.
Bulk Water Supply Agreement	The Bulk Water Supply Agreement between the SCA and Sydney Water signed on 13 April 2006.
Commencement Date	1 July 2006
End of Term Review	A review of the Operating Licence to be undertaken on or about 1 January 2009.
Function	Means a power, authority or duty.
Minister	The Minister responsible for administering the provisions of the *Sydney Water Act, 1994*.
Operating Licence	The Licence between 1 July 2005 and 30 June 2010.
Water Management Licence	A Water Management Licence granted under the *Water Act, 1912* and issued by the DNR on 26 August 2005.

COMPLIANCE TABLE ASSESSMENT

Term	Meaning
Grading of Compliance	The following ratings are used to grade achievement of compliance with a Licence condition.
Full compliance	All requirements of the condition have been met.
High compliance	Most requirements of the condition have been met with some minor technical failures or breaches.
Moderate compliance	The major requirements of the condition have been met.
Low compliance	Key requirements of the condition have not been met but minor achievements regarding compliance have been demonstrated.
Non compliance	The requirements of the condition have not been met.
Insufficient information	Relevant, suitable or adequate information to make an objective determination regarding compliance was not available to the auditor.

No requirement	The requirement to comply with this condition does not occur within the audit period there is no requirement for Sydney Water to meet, (such as a definition), the requirement placed upon another agency, or the requirement was met in an earlier audit period.
Desktop	These clauses were the subject of a desktop audit by IPART, itself, and not within GHD's scope.

Preface

GHD Pty Ltd was commissioned by the Independent Pricing and Regulatory Tribunal (IPART) to undertake the 2006/07 Operational Audit of the Sydney Water Corporation (Sydney Water). The Audit (and the extent of this report) covers the period 1 July 2006 to 30 June 2007.

The scope of the audit is defined in Part 12 of the Operating Licence. The scope includes assessment of compliance against the Ministerial requirements as presented by the Minister responsible for administering the provisions of the *Sydney Water Act, 1994*, following the 2005/06 Operational Audit. The scope of the audit has been further defined through the use of a risk-based methodology which had the objective of focussing on areas of higher risk.

The findings of the report are presented in a format consistent with the Operating Licence structure and not in a 'prioritised order' or 'order of significance'. The report also identifies factors that have affected compliance and presents recommendations to improve compliance in subsequent years.

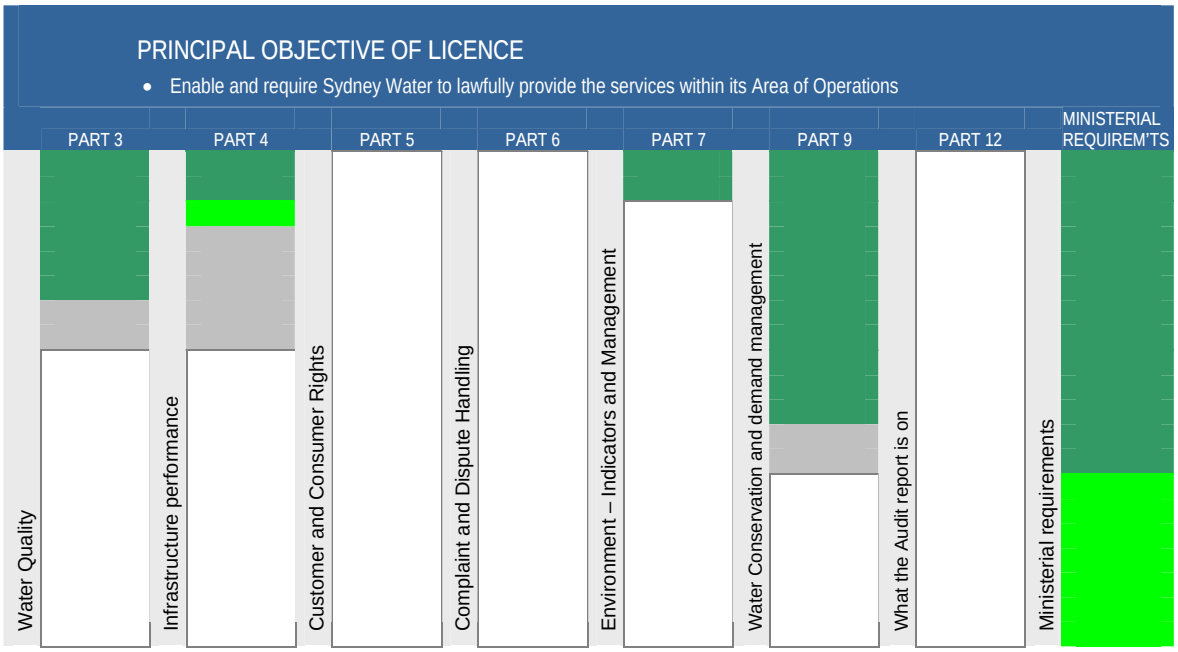
The audit methodology involved the preparation of an audit plan, inception meetings, application of audit tests, review and reporting. The audit tests directly relate to the respective clauses of the Operating Licence conditions, assembling evidence through document review, interviews and analysis to determine compliance.

In 2006/07, a risk-based audit methodology was, for the first time, applied. The methodology is consistent with Australian/New Zealand Standard AS/NZS 4360:2004 Risk Management ('the Standard') and recognised by the Australian Drinking Water Guidelines (ADWG) as an appropriate framework for analysis and management of risks associated with water provision from catchment to consumer. The methodology forms the basis of an audit program for the term of the Licence (that is 2006-2010).

Executive Summary

The Sydney Water Corporation (Sydney Water) has managed its resources to achieve predominately **Full compliance** with the Operating Licence, although some clauses were assigned a **High compliance**. Figure 0-1 provides an indicative overview of Sydney Water's level of compliance. Note that only those clauses subject to audit in 2006/07 are shown in this figure. Appendix A includes a comparison of compliance with previous years and details those clauses that were subject to audit in 2006/07.

Figure 0-1 Overview of Compliance for 2006/07 Audit Period



NOTE: Figure is indicative only.

	Full compliance	All requirements of the condition have been met.
	High compliance	Most requirements of the condition have been met with some minor technical failures or breaches.
	Moderate compliance	The major requirements of the condition have been met.
	Low compliance	Key requirements of the condition have not been met but minor achievements regarding compliance have been demonstrated.
	Non compliance	The requirements of the condition have not been met.
	Insufficient information	Relevant, suitable or adequate information to make an objective determination regarding compliance was not available to the auditor.
	No requirement	The requirement to comply with this condition does not occur within the audit period or there is no requirement for Sydney Water to meet, such as a definition or a requirement placed upon another agency.
	Desktop	These clauses were the subject of a desktop audit by IPART, directly, and were not within GHD's scope.

Compliance with the auditable Parts of the 2005-2010 Operating Licence (shown in brackets below) for the 2006/07 Audit period is summarised below.

Water Quality (Part 3)

Sydney Water was assigned **Full compliance** with respect to the requirements for the supply of treated drinking water to its customers. The water quality supplied is generally of an excellent standard and complies with the health related requirements of the Australian Drinking Water Guidelines and the aesthetic related requirements of NSW Health and the Minister.

Sydney Water has prepared an *Annual Drinking Water Quality Monitoring Plan* for the water supply systems to monitor health-related and aesthetic-related water quality parameters and to demonstrate compliance with the Guidelines. Sydney Water also obtained **Full compliance** for:

- Having regard to the concepts of risk minimisation and systems management in the operation of its water supply;
- Monitoring in accordance with the *Annual Drinking Water Quality Monitoring Plan* and maintaining an effective system of quality assurance for monitoring, sampling, testing and reporting on the Plan;
- The preparation of reports on water quality monitoring and water quality improvement;
- The preparation of a *Five Year Drinking Water Quality Management Plan 2005-2010*;
- The preparation of a *Drinking Water Quality Incident Management Plan*; and
- The requirements for *"supply of other grades of water"* for the Rouse Hill recycled water scheme and other schemes.

Infrastructure Performance (Part 4)

Sydney Water achieved **Full compliance** for most infrastructure performance requirements, such Water Pressure, Water Continuity, Sewerage Overflows, and System Performance Standards reporting.

High compliance was assigned in the calculation and reporting requirements for levels of water leakage. **High compliance** was also assigned for the achievement of specified response times for Priority 4 breaks/leaks requiring 100% of jobs to be attended to within 5 days.

Environment – Indicators and Management (Part 7)

Full compliance was assigned for evaluating the outcomes of the cost-benefit trial of individual meters in each unit of new multi-unit buildings; and for reporting to the Minister on the outcomes of the trial and Sydney Water's plans for future metering of units.

Water Conservation and Demand Management (Part 9)

Overall, Sydney Water demonstrated a high level of commitment to water conservation and demand management, and achieved **Full Compliance** for the Demand Management components of the Operating Licence.

The remaining clauses within Part 9 of the Licence were not included within GHD's scope of work for the 2006/07 audit.

Ministerial Requirements (Auditable)

For the *Ministerial Requirement* directing Sydney Water to install 40 flow meters before 30 June 2007, **Full compliance** was achieved. Sydney Water also achieved **Full compliance** in relation to the

Ministerial Requirement to '*restart the clock'* on recording the response time for water main breaks where the priority is amended.

Sydney Water achieved **High compliance** with the *Ministerial Requirement* that fourteen (14) water pressure control zones be established by June 2007.

A tabular comparison of the compliance levels attained by Sydney Water in the 2006/07 Audit period and over the four previous audit periods is presented in Appendix A.

‘The Big Picture’

The Audit program and scope for the 2006/07 Operational Audit of the Sydney Water Corporation has for the first time, been developed using a risk-based methodology, consistent with the required Australian/New Zealand Standard AS/NZS 4360:2004 Risk Management, and forms the basis of an audit program for the term of the Licence (that is 2006-2010). This approach enabled the regulatory effort to be focussed on providing greater assessment in the areas (clauses) of highest risk and reduced assessment in the areas (clauses) of lesser risk.

The audit has identified performance against the following key issues as ‘the big picture’ items for noting or action.

In brief:

- Sydney Water supplied excellent quality treated drinking water through a comprehensive water quality management, planning and monitoring systems, which complied with the Australian Drinking Water Guidelines and aesthetic requirements. Similarly, its supply of “other grades” of water (for example through water recycling) was also in full compliance.
- Sydney Water has in place a program to identify possible water quality problems, to assess the risks to water quality, and to manage these risks. This is carried out jointly with the Sydney Catchment Authority and NSW Health. Whilst no health issues arose over the year water quality issues, such as turbid waters resulting from heavy rains over the June 2007 long weekend and the outbreak of Blue Green Algae in the Warragamba reservoir did arise and illustrated that diligent and active management must be at the fore of operations and be the subject of continuous improvement programs.
- Sydney Water has continued to apply demand management programs to a high level with the aim of enhancing water conservation. Some 57 GL of potable water was saved in 2006/07, with consumption at 328 LCD corresponding to an estimated demand of 326 LCD, including reasonable adjustments for the effects of weather on water usage against the 2011 target of 329 LCD. Thus Sydney Water has met the 2011 target in 2007 through a combination of water restrictions and direct water conservation programs.
- Despite an increasing number of property connections, Sydney Water has demonstrated continuing improvement in a number of System Performance areas, such as a decreasing number of water pressure failures. However, other System Performance areas fell and in the case of sewer overflows all but triggered the 25,000 properties (compliance standard) experiencing uncontrolled sewage overflows in dry weather. In part, the increase is impacted by drought conditions. Actions will be needed to prevent this standard being triggered and to reverse the trend of increased sewer overflows demonstrated since 2003.
- At a broader level, Sydney Water has demonstrated a good balance within its Infrastructure performance. It has programs underway for enhanced Infrastructure Performance investigation (for example, in its *Active Leakage Detection Program*), which provides a better basis for prioritising and scheduling maintenance, and capital works programs. Yet due to the need to discontinue water supply while implementing these improvement programmes, overall service continuity is impacted. Not implementing these programs can also impact continuity, though for differing reasons (for example, unplanned sewerage overflows). Sydney Water will need to continue to balance the impact of infrastructure maintenance programs with its water and sewerage delivery performance standards.

- In terms of Sydney Waters performance under Part 7 of its Operating Licence, which relates to 'Environment-Indictors and Management', a full audit was conducted last year. Compliance in 2006/07 was assessed against Sydney Water's conduct of a trial to determine the costs and benefits of metering water use in each unit of multi-unit buildings. Sydney Water had undertaken a trial, provided a progress report on its Pilot program and was implementing components of its plan.
- The program of targeted Ministerial Requirements has continued over 2006/07 as outlined above. Ministerial Requirements have proved to be an effective tool in directing resources to problem, or potential problem, areas. Performance in these areas is generally found, the next year, to be in 'High' or 'Full' compliance.

Summary of Key Recommendations

The *key recommendations* of the 2006/07 Operational Audit are presented below and grouped by the audited parts of the Operating Licence.

Additionally, *secondary recommendations* are presented in the body of this report. Sydney Water is encouraged to give due consideration to those recommendations and facilitate improved performance and compliance for subsequent audit periods.

Licence Part 3 - Water Quality

It is recommended that Sydney Water:

R3.1 Confirm the requirements for compliance with Operating Licence clause 3.6.1 now that there are new guidelines issued (for example, *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006)*, and whether the requirement is only that the monitoring results must comply with certain requirements, or whether all the requirements of these guidelines should be complied with.

Licence Part 4 - Infrastructure Performance

It is recommended that Sydney Water:

R4.1 Analyze the extent of work it is undertaking under the Choke Management Strategy, and the corresponding levels of risk in failing to ensure future compliance with the sewage overflow standard, and report to IPART by 31st March 2008 on its findings in the context of the (2006) *Proposed System Performance Standard*.

R4.1 Clarify with IPART the ambiguity between *'Response Time to Water Main Breaks'* clauses (vis. Clauses C4.13.1 (c2) and 4.13.4) and include the outcome in SWC's *Monitoring and Reporting Protocol*.

Licence Part 7 - Environment – Indicators and Management

No key recommendations directly affecting compliance were identified in this section of the audit.

Licence Part 9 - Water Conservation and Demand Management

No key recommendations directly affecting compliance were identified in this section of the audit.

1. Introduction and Objectives

1.1 Sydney Water Corporation

Sydney Water Corporation (Sydney Water) is a State Owned Corporation, wholly owned by the NSW Government. The roles and responsibilities of Sydney Water derive from the *Sydney Water Act, 1994* (the Act) and the Operating Licence issued pursuant to Part 5 of the Act. In accordance with the Act, the NSW Government granted the first Operating Licence to Sydney Water in 1995. Sydney Water is currently operating under its third Operating Licence, effective 1 July 2005 to 30 June 2010.

Throughout its area of operations, being Sydney, the Blue Mountains and Illawarra regions (as shown in Figure 1-1), Sydney Water provides services to approximately four million customers. Schematic representations of the major sewer and water infrastructure, under the control of Sydney Water are shown in Figure 1-2 and Figure 1-2, respectively.

1.2 Independent Pricing and Regulatory Tribunal

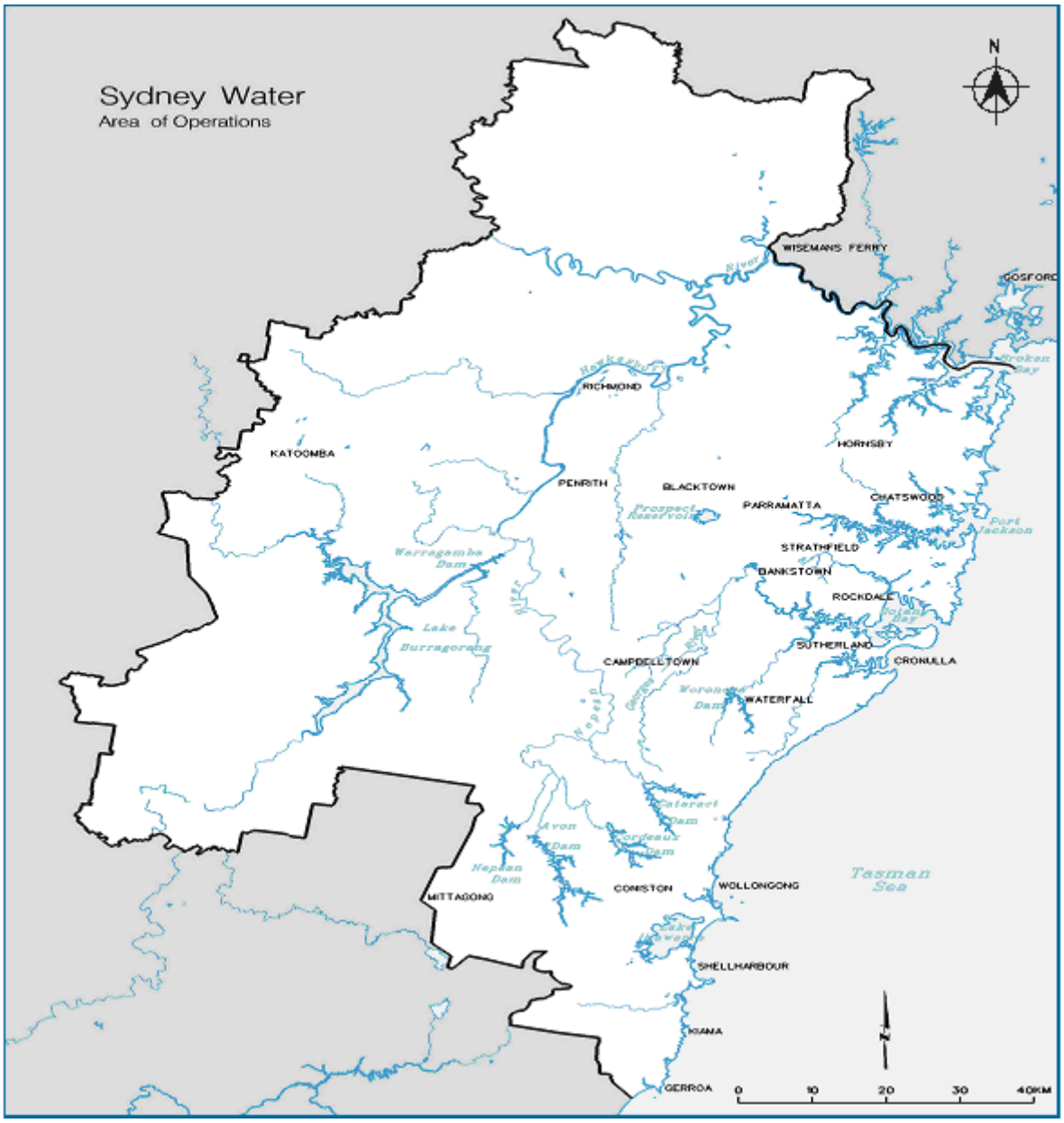
The Independent Pricing and Regulatory Tribunal (IPART) was established in 1992 to regulate the pricing of monopoly services. On 1 November 2000 the NSW Government initiated the *Independent Pricing and Regulatory Tribunal and Other Legislation Amendment Act*, which, under Schedule 1, transferred Licence auditing and other regulatory responsibilities for the three metropolitan water authorities (Sydney Water, Hunter Water and the Sydney Catchment Authority) to IPART. State Water was established by the State Water Corporation Act 2004, which provides that the corporation is regulated by IPART.

1.3 The Auditor

IPART commissioned GHD Pty Ltd to conduct the Operational Audit of Sydney Water for the 2006/2007-audit period.

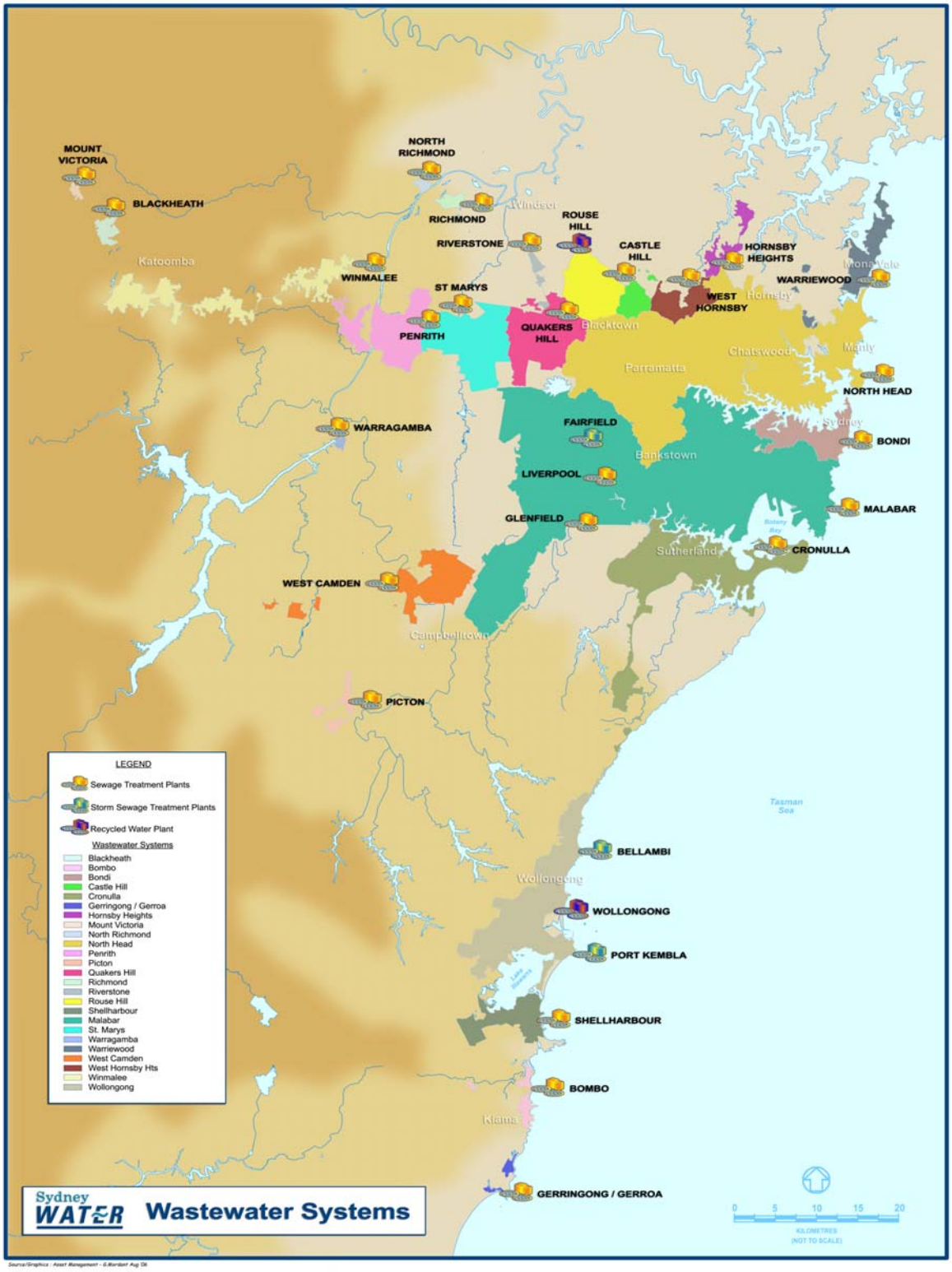
This commission was in accordance with Part 12.1 of the Operating Licence.

Figure 1-1 Sydney Water Corporation's Area of Operations



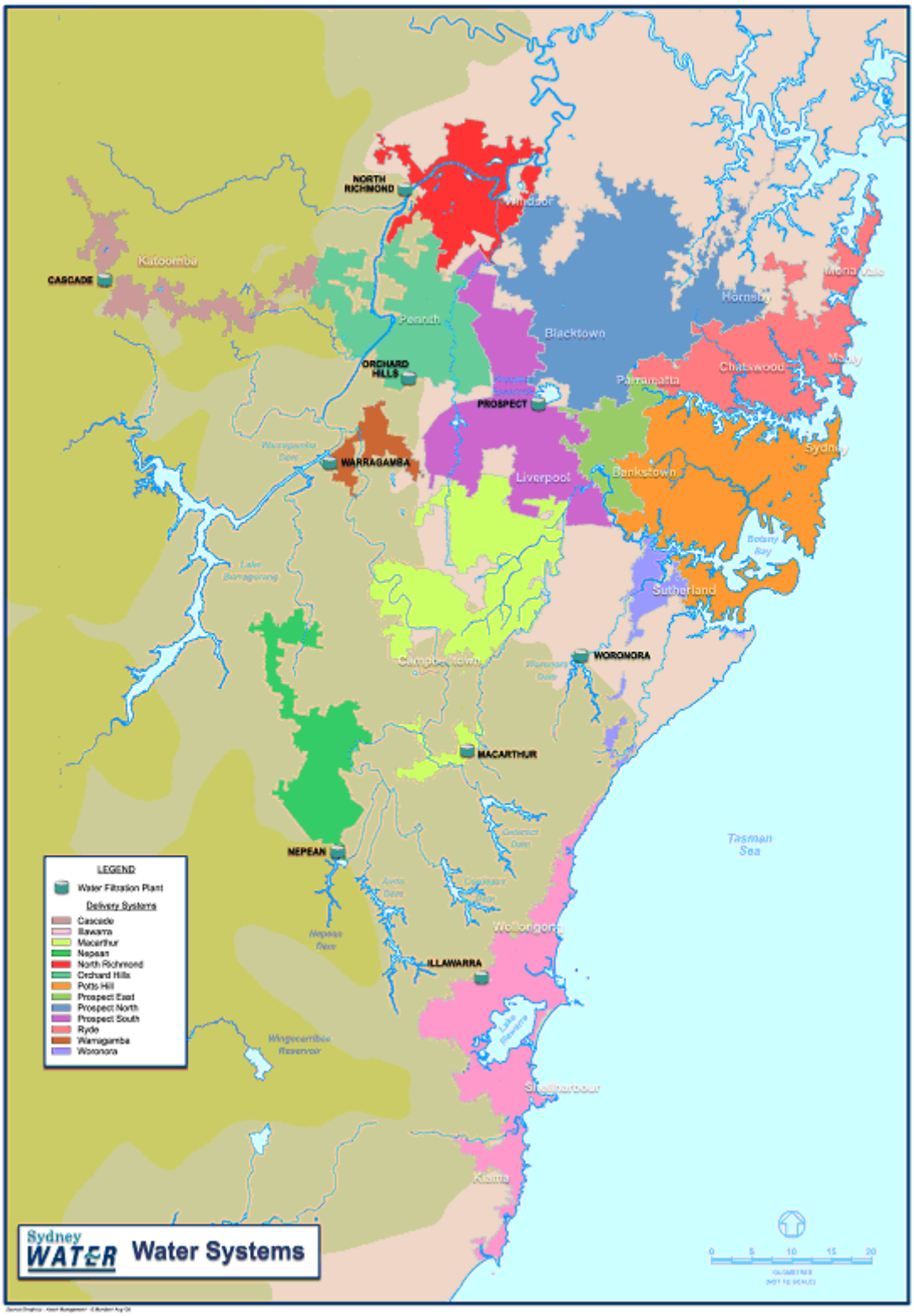
Source: Sydney Water Corporation

Figure 1-2 Sydney Water Corporation's Sewer Infrastructure



Source: Sydney Water Corporation

Figure 1-3 Sydney Water Corporation's Water Infrastructure



Source: Sydney Water Corporation

1.4 Scope of Operational Audit

Part 12 of the Operating Licence sets out the scope of an Operational audit, which includes the assessment of any of, or any part of, or all of the following:

(a) compliance by Sydney Water with its obligations in each of Parts 3, 4, 5, 6, 7, 8, 9, 10 and 11 (and any Schedules referred to in those Parts), of the Licence;

(b) Sydney Water's implementation of the Memoranda of Understanding; and

(c) any other matter required by this Licence, the Act or administrative direction to be assessed or considered as part of the Annual Audit.

IPART defined the scope for this audit, and the extent of this report, in accordance with Part 12.2.1 as outlined in Table 1-1. Table 1-1 also outlines where the auditor's assessments are located in the report.

Table 1-1 Scope of the 2006/07 Audit

Part	Report on:	Report Section
12.2.1 (a)	Compliance with obligations under Part 3 - Water Quality	Section 5
	Compliance with obligations under Part 4 - Infrastructure (System) Performance	Section 4
	Compliance with obligations under Part 7 - Environment – Indicators and Management	Section 6
	Compliance with obligations under Part 9 - Water Conservation and Demand Management	Section 7
12.2.1 (c)	Compliance with the requirements of the Minister for Energy and Utilities resulting from the 2004/05 and 2005/06 Operational Audits.	Section 3

1.5 Risk-based Audit Methodology

The Audit program and scope for the Operating Licence has this year, for the first time, been developed using a risk-based methodology. The aim of this approach is to improve the effectiveness and efficiency in auditing without increasing the risk to the key stakeholders, including the community, Sydney Water, IPART and the NSW Government.

The risk-based audit methodology was developed for IPART, by GHD Pty Ltd, in consultation with IPART, SWC and stakeholders. The methodology is consistent with Australian/New Zealand Standard AS/NZS 4360:2004 Risk Management ('the Standard'). Standard is recognised by the Australian Drinking Water Guidelines (ADWG) as an appropriate framework for analysis and management of risks associated with water provision from catchment to consumer. The methodology forms the basis of an audit program for the term of the Licence (that is, 2006-2010).

By applying a risk-based approach to the audit, the regulatory effort can be focussed on providing greater assessment in the areas (clauses) of highest risk and reduced assessment in the areas (clauses) of lesser risk.

In order to develop the risk-based 2006/10 Audit program and 2006/07 Audit scope, GHD Pty Ltd undertook a risk assessment for each clause of the Operating Licence. This risk assessment included identification of factors that might increase or decrease the level of auditing required for each clause. The level of risk presented by each clause was determined using a risk matrix, of consequence of risk versus likelihood. The risk matrix was skewed to reflect the fact that IPART has the capacity to manage certain critical control points in the water supply system to prevent (to an acceptable level) catastrophic impacts from occurring. GHD Pty Ltd used the resulting risk profile for each clause to develop the five-year Audit program. The methodology used by GHD in establishing the Audit Program is detailed in Appendix E.

The full audit brief is contained in Appendix B. The Operating Licence and the Ministerial requirements are provided in Appendix C and D, respectively.

This audit covers the period 1 July 2006 to 30 June 2007.

1.6 Structure of the Audit Report

This 2006/07 Operational Audit report has been presented in 'plain English' and in a format directed at different levels of readership and to allow an understanding of Sydney Water's operations and its compliance with specific statutory requirements.

The audit report has been specifically prepared to meet the audit brief and Part 12 of the Operating Licence. The findings of the report are not presented in a 'prioritised order' or 'order of significance'. Rather, the report is designed to follow the structure of the Operating Licence. The report is structured into compliance sections that correspond to the key areas (Parts) of the Operating Licence (see Table 1-1 above). Each compliance section of the report provides the following:

- A *compliance summary* addressing the principal compliances and any non-compliances;
- A *requirements summary* placing in context and summarising the requirements of the Operating Licence against which the performance of Sydney Water is assessed; and
- *Substantive evidence and findings* that support the assessments of compliance and are presented in compliance tables.

This is followed by:

- A discussion or expansion of compliance comments, where required;
- Factors affecting compliance, where applicable; and
- Recommendations for each key area.

2. Audit Methodology

2.1 Standards

To meet the specific requirements of IPART, the Operational Audit was undertaken adopting a methodology consistent with ISO14011 "*Guidelines for Environmental Auditing*". This guideline provides a *systematic approach* to defining the requirements of the audit, planning, interpreting Licence conditions, collecting audit evidence, objectively assessing the evidence, and reporting in a clear and accurate manner. It also ensures that the audit has been conducted in accordance with an established and recognised audit protocol.

As outlined earlier (see section 1.5), the Audit program and scope for the Operating Licence for 2006/07 has been developed using a risk-based methodology.

2.2 Audit Preparation

The audit methodology used in the preparation of this audit is described below.

Draft Audit Plan

To ensure that the audit requirements outlined in the Operating Licence and the brief were addressed, the scope of the audit was confirmed with IPART and a draft audit plan prepared.

Inception Meetings

Following the preparation of the draft audit plan, an inception meeting was held with Sydney Water's Managing Director and other representatives on September 17th 2007. IPART representatives also attended the meeting.

The primary objective of this meeting was to: develop a working relationship, mutual understanding and expectation relating to the requirements and process of the audit; to discuss and agree upon the changes to the audit methodology; and to provide an opportunity for Sydney Water to present an overview of compliance and progress since the previous audit period.

Audit Questionnaires

Specific audit questionnaires were developed for all requirements within the scope of the audit. These questionnaires were designed to establish *substantive compliance* with the Licence requirements as well as to *identify factors that have, or may have impact on performance in the future*.

The audit questionnaires also assessed the underlying procedures that Sydney Water has in place relevant to the requirements, and the application of these procedures by Sydney Water. This was designed to verify that the underlying management processes within the organisation are sound, and there is confidence that work is carried out systematically and in accordance with internal procedures.

Audit questionnaires were, in most cases, provided to Sydney Water one week prior to the audit interviews to allow Sydney Water the opportunity to prepare for the interview and collate the necessary documentary evidence.

2.3 Conduct of the Audit

To ensure a positive relationship, audit protocols were established at the inception meeting between the auditor and Sydney Water representatives. The protocols were designed to ensure efficient and transparent information transfer and foster an open and professional working relationship between all parties.

Both Sydney Water and the auditor generally adhered to the agreed protocols.

2.4 Audit Interviews

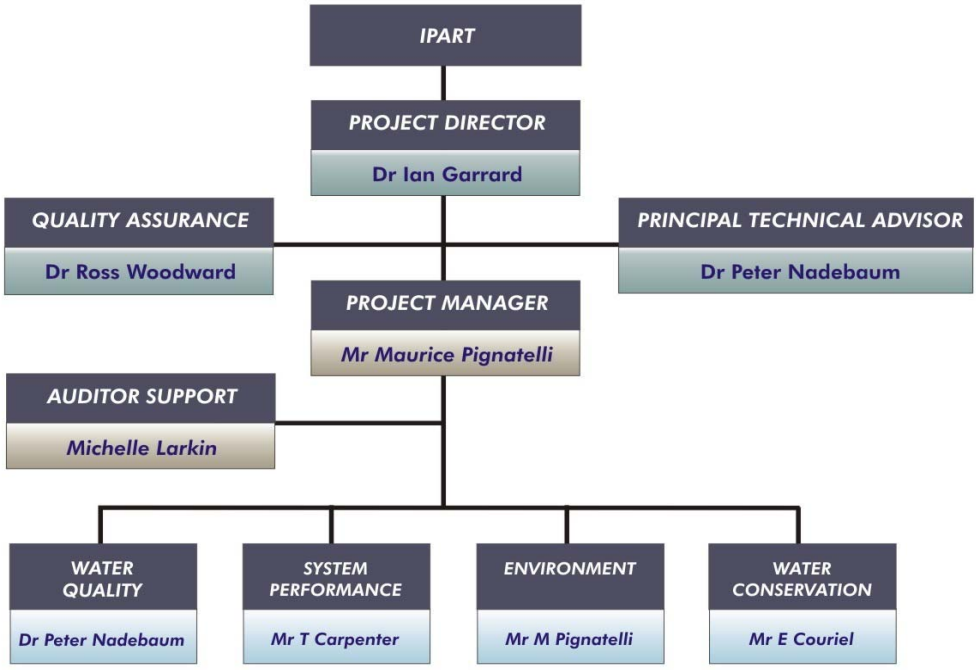
The specialist auditors conducted interviews during September and October 2007. The interviews were generally guided, but not limited, by the pre-prepared questionnaires and Sydney Water was provided the opportunity to present evidence towards demonstrating compliance with the Licence requirements.

An IPART representative also attended the audit interviews.

2.5 Audit Team

The audit team consisted of specialist auditors from GHD Pty Ltd. The audit was coordinated by the Project Manager calling on the expertise of the team members for the auditing of key areas as shown below in Figure 2-1.

Figure 2-1 Structure and Responsibility of the Audit Team



3. Regulatory Regime

3.1 Introduction

Sydney Water has the primary role of managing potable water supply and sewage treatment (including assets) to protect public health and the environment for the benefit of Sydney and surrounding urban areas. These roles and responsibilities of Sydney Water are derived from the *Sydney Water Act, 1994* and the Operating Licence issued pursuant to Part 5 of the Act.

The NSW Government in 1995 granted the Operating Licence to Sydney Water. Sydney Water is now operating under its third Operating Licence.

The Act establishes a set of subordinate statutory instruments, namely: the Operating Licence; Memoranda of Understanding (MOUs) with regulatory or other agencies; and a Customer Contract. Such instruments impose compliance requirements upon Sydney Water.

A brief description of the major components of the regulatory framework within which Sydney Water operates is presented below.

3.2 Sydney Water Act, 1994

Under Section 21 of the Act, the principal objectives of Sydney Water are as follows:

- *To be a successful business and to this end operate at least as efficiently as any comparable businesses, maximise the net worth of the State's investment in the Corporation, and exhibit a sense of social responsibility by having regard to the interests of the community in which it operates;*
- *To protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development contained in section 6(2) of the Protection of the Environment Administration Act, 1991; and*
- *To protect public health by supplying safe drinking water to its customers and other members of the public in compliance with the requirements of any operating licence.*

In addition, Sydney Water has special objectives under Section 22(1) regarding reduction of risks to human health and preventing the degradation of the environment.

The Act also establishes the provisions listed in Table 3-1.

Table 3-1 Provisions of the *Sydney Water Act, 1994* - Relating to the Audit

• The Sydney Water Corporation (Sydney Water); • The functions of Sydney Water; • The area of operations; • The granting of the Operating Licence; • The objectives of Sydney Water; • The functions of the Licence Regulator; • Environmental management; • The Operational Audit;	• Provisions relating to works; • The preparation and implementation of MOUs; • Customer contracts; • Fees and charges; • Management of infrastructure; • Offences provisions; and • Other miscellaneous matters.

3.3 Operating Licence

Sydney Water must conduct its activities in accordance with an Operating Licence issued under section 12 of the *Sydney Water Act, 1994*. The current Operating Licence has affect from 1 July 2005 to the 30 June 2010.

The nature and scope of the Operating Licence and period have been presented in Section 1.4 of this report. The Operating Licence is reproduced in Appendix B.

A summary of the requirements of each Part of the Operating Licence is presented in Section 4 to Section 7 of this report.

3.4 Customer Contract

The Customer Contract sets out the terms of the contract between Sydney Water and each person who is defined to be a customer of Sydney Water. It sets out the rights and obligations of customers and those of Sydney Water. The Contract is comprehensive and includes the areas outlined in Table 3-2.

This audit assesses Sydney Water's performance against the revised Customer Contract.

Table 3-2 Key Areas of the Customer Contract

- Who is covered;
- Services provided by Sydney Water including water supply, sewerage services, stormwater drainage;
- Charges and payment;
- Assistance in payment;
- Disconnection or restriction of services;
- Redress;
- Responsibilities for maintenance;
- Entry into a customer's property for maintenance;
- Water meter installation, testing and maintenance;
- Obtaining information from Sydney Water;
- Complaints and complaint handling;
- Consultation, information and privacy; and
- Termination of the contract.

3.5 Memoranda of Understanding

Sydney Water is required, under Part 6, Division 3 of the Act and the provisions of the Operating Licence, to enter into Memoranda of Understanding (MOUs) with certain agencies. The objective of the MOU is to assist in the formation and development of "*cooperative relationships*" between the agencies with a view to furthering the objectives of the Operating Licence and the Act.

The key regulatory agencies with which Sydney Water has established MOUs are:

- Water Administration Ministerial Corporation (within the NSW Department of Natural Resources - DNR);
- NSW Department of Health (NSW Health); and
- NSW Environmental Protection Authority (within the NSW Department of Environment and Climate Change – DECC).

MOUs are useful in identifying roles and responsibilities, and for establishing the frameworks for on-going consultation and joint initiatives between the parties. They become more useful and rigorous documents when they also contain specific agreements for strategic planning, implementation, monitoring and the review of programs.

3.6 Other Acts

Sydney Water is obliged to comply with the provisions of all other NSW Acts. The Acts that are most relevant to this audit include:

- *Protection of the Environment Operations Act, 1997*;
- *Public Health Act, 1991*;
- *Water Act, 1912*;
- *Water Management Act 2000;*
- *Independent Pricing and Regulatory Tribunal Act, 1992;*
- *State Owned Corporations Act; and*
- *Environmental Planning and Assessment Act, 1979*.

3.7 Ministerial Requirements

Directive No.	Summary of Requirement
Summary of Ministerial requirements arising from 2004/05 Operational Audit	
MR 4.1	Achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007: (a) 18 flowmeters in 2005/06 and 50 in 2006/07, including 30 renewals (b) 21 pressure zones created by June 2007.
Summary of Ministerial requirements arising from 2005/06 Operational Audit	
MR 1	Leakage Reduction *"I require that Sydney Water achieve the revised flowmeter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006. This entails the installation of 40 flowmeters before 30 June 2007 and installation of the remaining 28 flowmeters before 30 September 2008."*
MR 2	Clarification of Leakage Response Times *"The revised Sydney Water Operating Licence includes a requirement that Sydney Water achieves certain response times to water main breaks and leaks. Response times have been established according to a set of priorities reflecting the severity of the water loss situations. In cases where the priority of a water loss situation is upgraded as a result of experienced "on-site" analysis, I concur with the Tribunal's suggestion that the response time relevant to the amended priority should commence when this amended priority is established. I would be grateful if Sydney Water could reach agreement with the Tribunal to incorporate this clarification into the Monitoring and Reporting Protocol."*

4. System Performance

4.1 Summary of findings

- Sydney Water achieved **Full compliance** with the Water Pressure Standard requiring no more than 15,000 properties to be affected in a financial year. Sydney Water reported 1,094 properties as experiencing a water pressure failure in 2006/07. This is an improvement over the last two years where 2,860 (2004/05) and 2,540 (2005/06) properties were affected.
- Sydney Water achieved **Full compliance** with the Water Continuity Standard requiring no more than 35,000 properties be affected by an *"unplanned water interruption"* exceeding five hours and no more than 32,000 properties be affected by a *"planned and warned"* interruption exceeding five hours.
  - There were a total of 29,592 properties affected by the 507 *unplanned* shut down events that exceeded five hours, this is below the limit specified (compared to 19,214 properties in 2004/05 and 27,805 in 2005/06). The increase in unplanned water interruptions is attributable to the Operating Licence requirement to stop loss of water within specified timeframes (leading to increasing outage durations).
  - There were a total of 17,292 properties affected by 169 *planned* shut down events that exceeded five hours, this is below the limit specified (compared with 8,527 properties in 2004/05 and 14,220 in 2005/06). The increase in planned water interruptions is attributable to the increasing emphasis on water main renewal and leakage reduction strategies.
- Sydney Water achieved **Full compliance** with the requirement for Sewage Overflows on Private Property for no more than 25,000 properties (other than public properties) to experience an Uncontrolled Sewage Overflow in dry weather. Sydney Water reported 24,924 uncontrolled sewage overflows on private properties in dry weather (compared to 21,462 properties in 2004/05 and 22,572 in 2005/06). While part of this increase is attributable to an increase in property density, should this trend continue during the 2007/08 licence year, Sydney Water has the potential to exceed this standard and there is a need to consider revision of the chosen property density limit in their choke management strategy.
- Clauses 4.8, 4.9 and 4.10, relating to asset management, had **No requirement** for 2006/07.
- Sydney Water is required to meet a target leakage rate of 105 ML/d by 30 June 2009 and, therefore, there is **No requirement** for 2006/07. It is noted, however, that Sydney Water has achieved significant reductions in leakage, from a rate of 188 ML/d in 2002/03 to 121.0 ML/d in 2006/07 and that this reduction is tracking the long-term trend needed for achieving the target.
- Sydney Water achieved **High compliance** with the calculation and reporting requirements for levels of Water leakage.
- Sydney Water achieved **Full compliance** with the requirement for providing Reports related to water leakage on:
  - progress in installing, and the future installation program for, bulk water meters;

- progress in creating, and the future creation program for, water pressure control zones;
- the number of bursts, breaks or leaks and the time taken to repair these; and
- the programs for water main and reservoir zone inspections and the program for rehabilitation of reservoir zones.

- Sydney Water achieved **Full compliance** with all requirements for achieving specified Response time(s) for water main breaks except clause 4.13.1 (c) – criteria 2.
- Sydney Water obtained **High compliance** with 4.13.1 (c) criteria 2—Priority 4 breaks/leaks requiring 100% of jobs to be attended to within 5 days; and Sydney Water obtained 96% (noting this priority is subject to clause 4.13.4).
- Sydney Water obtained **Full compliance** with the first stage of the revised Ministerial requirement on flow meter installation, entailing the installation of 40 flow meters before 30 June 2007. As Sydney Water installed 43 flow meters.
- Sydney Water obtained a **High compliance** with the Ministerial requirement that 14 water pressure control zones be established by June 2007. Sydney Water achieved installation of 12 pressure control zones by June 2007 and completed the final two prior to the date of the audit interview. It is the auditors opinion that the delay in completing the final two zones was justified and since compliance was achieved only a short time after that originally required, no recommendations are proposed.
- Sydney Water obtained **Full compliance** with the Ministerial requirement to *'restart the clock'* on recording the response time for water main breaks where the priority is amended.

4.2 Ministerial Requirements

In respect to Ministerial requirements, Sydney Water is required to do the following.

- Achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007:
  - 14 pressure zones created by June 2007; and
  - entails the installation of 40 flow meters before 30 June 2007 and installation of the remaining 28 flow meters before 30 September 2008.
- Clarification of Leakage Response Times:
  - In cases where the priority of a water loss situation is upgraded as a result of experienced "on-site" analysis, the response time relevant to the amended priority should commence when this amended priority is established.

4.3 Details of Compliance

Table 4-1 Details of compliance and audit findings

Clause	Requirement	Compliance	Findings
4.1 - Compliance with System Performance Standards			
4.1.1	Sydney Water must ensure that no more than 15,000 properties experience a water pressure failure in a financial year. This is known as the water pressure standard.	Full compliance	Sydney Water has reported 1,094 properties as experiencing a water pressure failure in 2006/07. There were 539 properties affected due to capacity issues and 555 properties affected due to abnormal operations. This is less than last year where 2,540 properties were affected by water pressure failure.
4.1.2	A Property experiences a water pressure failure if the Property experiences a pressure of less than 15 metres for a continuous period of 15 minutes or more measured at the point of connection of the Property to Sydney Water's water supply system, usually at the point of connection known as the "main tap".	Full compliance	Sydney Water's operational interpretation is consistent with the definition.
4.1.3	For the purpose of the water pressure standard (including clause 4.7 and the Schedules), the following applies: (a) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property; (b) a Property is taken to have experienced a water pressure failure at each of the following times:	Full compliance	Sydney Water's operational interpretation is consistent with the definition.

Clause	Requirement	Compliance	Findings
	I. 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 II. when Sydney Water's systems identifies that the Property has experienced a water pressure failure; and (c) 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 in accordance with Schedule 6 or from abnormal demand (such as demand during fire fighting).		
4.1.4	Clause 4.1.3 does not limit the circumstances in which a Property will have experienced a water pressure failure under clause 4.1.2.	Full compliance	Sydney Water's operational interpretation is consistent with the definition.
4.2 - Water Continuity Standard			
4.2.1	Sydney Water must ensure that: a) no more than 32,000 properties experience a Planned Water Interruption exceeding 5 hours in a financial year; and b) no more than 35,000 properties experience an Unplanned Water Interruption exceeding 5 hours in a financial year.	Full compliance	a. A total of 17,292 properties were affected by the 169 *planned* shut down events; this is below the limit specified in the standard of 32,000. Sydney Water claims the number of properties affected by a planned shut down increased due to the expanded water main renewal and leak reduction program. In 2005/06, 14,220 properties were affected by planned shutdowns. Sydney Water report that the number of properties affected by a planned water interruption is closely related to the level and nature of maintenance work being undertaken on the water network. The combination of Sydney Water's expanded water main renewal and leak reduction programs, has increased

Clause	Requirement	Compliance	Findings
	This is known as the water continuity standard.		the number of planned interruptions. b. A total of 29,592 properties were affected by the 507 *unplanned* shut down events that exceeded five hours; this is below the limit specified in the standard of 35,000 properties being affected by *unplanned* shutdowns. In 2005/06, 27,805 properties were affected by unplanned shut downs, thus this 2006/07 figure is higher than 2005/06. The number of properties affected by an unplanned water discontinuity event greater than 5 hours is closely associated with the number of water main breaks that occurred during the period.
4.2.2	4.2.2 For the purpose of the water continuity standard, the following applies: (a) in determining whether a Property experiences a Planned Water Interruption or 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; (b) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property; and (c) for the avoidance of doubt, a Property is taken to have experienced a separate Planned Water Interruption or an Unplanned Water Interruption for each period of 5 hours or more that the Planned Water Interruption or Unplanned Water Interruption (as the case may be) exists.	Full Compliance	Sydney Water's operational interpretation is consistent with the definition.

Clause	Requirement	Compliance	Findings
4.2.3	Clause 4.2.2 does not limit the circumstances in which a Property will have experienced a Planned Water Interruption or an Unplanned Water Interruption under clause 4.2.1.	Full compliance	Sydney Water's operational interpretation is consistent with the definition.
4.3 - Sewage Overflows on Private Property Standard			
4.3.1	Sydney Water must ensure that no more than 25,000 Properties (other than Public Properties) experience an Uncontrolled Sewage Overflow in dry weather in a financial year. This is known as the sewage overflow standard.	Full compliance	Sydney Water reported 24,924 uncontrolled dry weather sewage overflows on private properties. This is very close to the target set in the standard of 25,000 and is higher than last year when 22,572 properties were affected. There has been an upward trend since 2003/04, and if the trend continues, next year the standard is likely to be exceeded. The higher incidence of choke events in 2006/07 resulted in increased numbers of both single and multiple properties affected. Multiple occupancy properties continue to influence this standard, from the total 13,340 sewage overflow events, which affected 24,924 properties, 36 of these events affected 3,300 multiple occupancy properties.
4.3.2	For the purpose of the sewage overflow standard, each separately billed or separately occupied part of a multiple occupancy Property is a separate Property.	Full compliance	Sydney Water's operational interpretation is consistent with the definition.

Clause	Requirement	Compliance	Findings
4.4 - Compliance with performance standards			
	Sydney Water must comply with the water pressure standard in Clause 4.1.1, the water continuity standard in Clause 4.2.1 and the sewage overflow standard in Clause 4.3.1.	Full compliance	Sydney Water had full compliance with the standards of water pressure, water continuity and sewage overflows.
4.5 - Reporting on System Performance Standards			
4.5.1	By no later than 1 September each year, Sydney Water must report to IPART on its compliance with the water pressure standard, the water continuity standard and the sewage overflow standard.	Full compliance	Evidence was produced that Sydney Water submitted their report, on performance against compliance, by 1 September 2007.
4.5.2	By no later than 1 September each year, Sydney Water must report to IPART on the number of Properties in the preceding financial year that experience the following: (a) a water pressure failure; (b) a Planned Water Interruption or an Unplanned Water Interruption; (c) an Uncontrolled Sewage Overflow.	Full Compliance	Evidence was produced that Sydney Water submitted their report, on performance against compliance, by 1 September 2007.
4.5.3	Sydney Water must maintain record systems sufficient to enable it to measure accurately its performance against the water pressure standard, the water continuity standard and the sewage overflow standard and to enable	Full compliance	Evidence was produced that Sydney Water maintains recording systems sufficient to enable it to accurately measure its performance against the water pressure standard, the water continuity standard and the sewage overflow standard and to enable reporting against those standards.

Clause	Requirement	Compliance	Findings
	measurement and reporting by Sydney Water of those standards by delivery systems. Delivery system in this clause means the geographic classification used by Sydney Water for its own internal purposes, based on geographic regions forming part of the Services.		
4.5.4	Sydney Water must provide IPART with physical or electronic access to the records kept by Sydney Water that enable it to report under clause 4.5.1.	Full compliance	Sydney Water produced both physical and electronic access to their records.
4.6 - Review of System Performance Standards			
4.6.4	Any amendments to the performance standards that must be adopted by Sydney Water under clause 4.6.3 must be incorporated into the Customer Contract as soon as reasonably possible and also considered as part of any review of the Customer Contract.	No requirement	Review project timeline extends beyond end of audit period.
4.7 - Service quality and system performance indicators			
4.7.1	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 in Schedule 1.	Full compliance	Evidence was provided that Sydney Water maintains record systems in order to accurately measure its performance against the service quality and system performance indicators in Schedule 1.

Clause	Requirement	Compliance	Findings
4.7.3	By 1 September 2007 and at the same time in each subsequent year, Sydney Water must report to IPART its performance against the service quality and system performance indicators in Schedule 1 for the immediately preceding financial year. The report must include an analysis of any problems of a systemic nature.	Full compliance	By 1 September 2007, Sydney Water reported to IPART its performance against the service quality and system performance indicators in Schedule 1 for 2006/07. The Sydney Water Operating Licence Compliance report, 1 July 2006 to 30 July 2007, included an analysis of any problems of a systemic nature.
4.7.4	As part of its report, Sydney Water must provide IPART with physical and electronic access to the records kept by Sydney Water that enable it to report under Clause 4.7.3.	Full compliance	Sydney Water provided IPART with physical and electronic access to the records kept by Sydney Water that enable it to report under clause 4.7.3.
4.11 - Water Leakage			
4.11.1	Sydney Water must ensure that by 30 June 2009, the amount of Water leakage from its Drinking water supply system does not exceed 105 megalitres a day.	No requirement	Sydney Water has prepared a Standard Operating Procedure for *"drinking water leakage and response to water main breaks"*. In 2006/07, leakage was estimated to be 44.3 GL/year or 121.3 ML/d. This figure is higher than 2005/06 performance when 116.7 ML/d was the estimated leakage. Note that in 2006/07 Sydney Water adopted the WSAA default value of 2 per cent for customer meter under-registration, which resulted in the 2005/06 figure being reduced from 123 to 116.7ML/d. The uncertainty band on leakage as calculated by annual water balance is estimated to be ±25% (95% confidence limit). Sydney Water report that the calculation of real loss utilises quarterly average data over the year following the date on which the target is required to be reached, therefore Sydney Water claim that the calculation of the target of 105 ML/d by June 2009 will not be able to be done until 12 months after the target date. This is contrary to their previous reporting approach and may result in a non-compliance if Sydney Water do not notify the Minister and come to an

Clause	Requirement	Compliance	Findings
			agreement on the measurement and reporting against this performance target.
4.11.2	Each year Sydney Water must calculate the level of Water leakage from its Drinking water supply system using the assumptions and methodology approved by IPART.	High compliance	Sydney Water has adopted the WSAA default value of 2 per cent for customer meter under-registration, which has resulted in a change of ILI figures. Sydney Water have not sought approval from IPART on these changes, however these defaults are Australian Standard and defined by WASA.
4.11.3	On 1 September 2007 Sydney Water must report to IPART on: (a) the economic level of Water leakage for the preceding financial year and how that level of Water leakage is calculated; and (b) its assessment of its progress towards compliance with clause 4.11.1	No requirement	Sydney Water calculated and provided to IPART its economic level of leakage. Sydney Water provided an assessment of its progress that outlined its continued use of strategies to improve water leakage reduction and increase confidence in the economic level of water leakage figures. Sydney Water is progressing with additional active leak detection which is predicted to deliver about 7-8 ML/d additional savings towards the 2009 target. Although Sydney Water is progressing towards its 105ML/d target by June 30 2009, it will report that achievement later than 2009. This may result in a non-compliance if Sydney Water do not notify the Minister and come to an agreement of the measurement of this performance standard.
4.12 - Reports related to water leakage			
4.12.1	Sydney Water must report to IPART no later than 1 September 2007 on the number of bulk water meters in Sydney Water's Drinking water system that Sydney Water: (a) intends to install in the current and subsequent financial years; and (b) had planned to install in a financial year compared with the number actually installed in that financial year.	Full compliance	Sydney Water reported to IPART by 1 September 2007 (see compliance report). Sydney Water installed a total of 43 flow meters installed and operational at June 30 2007. Design of the remaining 25 is complete and materials ordered. It is forecasted that all 68 flow meters will be operational by September 2008 as per the revised target.

Clause	Requirement	Compliance	Findings
4.12.2	Sydney Water must report to IPART, no later than 1 September 2007, on the number of water pressure control zones in Sydney Water's Drinking water system that Sydney Water: (a) intends to complete in the current and subsequent financial years; and (b) had planned to complete in a financial year compared with the number actually completed in that financial year.	No requirement	Sydney Water reported to IPART by 1 September 2007 (see compliance report). IPART Desk Audit
4.12.3	Sydney Water must report to IPART, no later than 1 September 2007, on the number of bursts, breaks or leaks (in the trunk and reticulation component of Sydney Water's Drinking water system between water treatment plants and a Property) which occurred in the immediately preceding financial year and the time taken by it to repair those bursts, breaks or leaks.	No requirement	Sydney Water reported to IPART by 1 September 2007 (see compliance report). IPART Desk Audit

Clause	Requirement	Compliance	Findings
4.12.4	Sydney Water must report to IPART, no later than 1 September 2007, on: (a) the number of kilometres of reticulation mains it inspected during the preceding financial year for Water leakage; and (b) its program during the preceding financial year for inspecting reservoir zones for Water leakage and for rehabilitating reservoir zones to prevent or correct Water leakage.	No requirement	Sydney Water reported to IPART by 1 September 2007 (see compliance report). IPART Desk Audit
4.13 - Response time for Water main breaks			
4.13.1	Sydney Water's response to water main breaks and leaks (in the trunk and reticulation components of Sydney Water's drinking water system between water treatment plants and a property), as measured from the time Sydney	Full compliance, except for c) criteria 2 High	Overall, Sydney Water obtained full compliance with all but one criteria (for which high compliance was achieved) for this standard. The results for the individual requirements were: a) Priority 6 breaks/leaks:

Clause	Requirement	Compliance	Findings
	Water receives notification of a break or leak to the time Sydney Water stops the loss of water, shall be as follows: (a) Priority 6 breaks/leaks: 70% of jobs within 2 hours 90% of jobs within 3 hours (b) (b) Priority 5 breaks/leaks: 65% of jobs within 3 hours 85% of jobs within 6 hours (c) Priority 4 breaks/leaks: 50% of jobs by end of next working day 100% of jobs within 5 days, subject to clause 4.13.4	Compliance	70% of jobs within 2 hours—Compliance (Sydney Water achieved 86.9%) 90% of jobs within 3 hours—Compliance (Sydney Water achieved 94.2%). b) Priority 5 breaks/leaks: 65% of jobs within 3 hours—Compliance (Sydney Water achieved 71%) 85% of jobs within 6 hours—Compliance (Sydney Water achieved 92.6%). c) Priority 4 breaks/leaks: 50% of jobs by end of next working day—Compliance (Sydney Water achieved 79.6%) 100% of jobs within 5 days—Non-Compliance (Sydney Water achieved 96%)
4.13.2	Categorisation of Priorities 4, 5 and 6 is to be finalised by IPART and published on Sydney Water's Internet site www.sydneywater.com.au	No requirement	IPART has finalised the categorisation.
4.13.3	On 1 September 2007, Sydney Water must report to the Minister and IPART on the number of breaks or leaks (in the trunk and reticulation components of Sydney Water's drinking water system between water treatment plants and a property) which occurred in the immediately preceding financial year and Sydney Water's performance against the targets in clause 4.13.1. The Minister from time to time may adjust targets based on Sydney Water's performance.	Full compliance	Evidence was produced that Sydney Water submitted its report on performance against the relevant standards by 1 September 2007.

Clause	Requirement	Compliance	Findings
4.13.4	Due to operational, planning and customer impact issues, it is recognised that Sydney Water will not be able to respond to 100% of priority 4 jobs within 5 days. Therefore Sydney Water shall annually submit to IPART a list of all instances of Non Compliance with the above target and the reasons for that Non Compliance. This will be reviewed as part of the annual operational audit.	Full compliance	Sydney Water provided its non-compliance list to IPART as part of its Compliance Report. Sydney Water achieved 96% for this standard. A table showing reasons for non-compliance in Priority 4 jobs is in the compliance report. The three major causes and the generic reason for non-compliance were difficult leak detection, adverse impact to customer and specialist equipment and/or contractors.

Table 4-2 Ministerial Requirements

Clause	Requirement	Compliance	Findings
Ministerial Requirement			
2004/05 Ministerial Requirement M1(b)	Achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007: (b) 21 pressure zones created by June 2007.	High compliance	This requirement was revised to 14 pressure zones encompassing the same number of customer properties and therefore achieving the same net effect as the originally envisaged 21 zones, but with improved financial efficiency. Sydney Water achieved installation of 12 pressure control zones by June 2007 and completed the final two prior to the date of the audit interview. Delays were incurred due to large main valving difficulties and maintenance of customer supplies.
2005/06 Ministerial Requirement M 1	Leakage Reduction *"I require that Sydney Water achieve the revised flowmeter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006. This entails the installation of 40 flowmeters before 30 June 2007 and installation of the remaining 28 flowmeters before 30 September 2008."*	Full compliance	Sydney Water reported a total of 43 flow meters installed and operational at June 30 2007. Design of the remaining 25 is complete and materials ordered. It is forecast that all 68 flowmeters will be operational by September 2008 as per the revised target.
2005/06 Ministerial Requirement M 2	Clarification of Leakage Response Times *"The revised Sydney Water Operating Licence includes a requirement that Sydney Water achieves certain response times to water main breaks and leaks. Response times have been established according to a set of priorities reflecting the severity of the water loss situations. In cases where the priority of a water loss situation is upgraded as a result of*	Full compliance	Sydney Water proposed the following in the review of the Monitoring and Reporting Protocol in April 2007. *"If the assessed priority is higher than the job priority, the response time will restart from the time of the assessment. If the assessed priority is lower than the job priority, the response time will continue from the time of the original caller notification and compliance will be measured pursuant to the assessed priority."* Sydney Water is awaiting comment from IPART on its proposed amendments to the Monitoring and Reporting Protocol." Sydney Water has implemented changes with report specifications to re-start the response clock when a break/leak job has its priority upgraded.

Clause	Requirement	Compliance	Findings
	experienced "on-site" analysis, I concur with the Tribunal's suggestion that the response time relevant to the amended priority should commence when this amended priority is established. I would be grateful if Sydney Water could reach agreement with the Tribunal to incorporate this clarification into the Monitoring and Reporting Protocol."		

4.4 Discussion

4.4.1 General Processes for Measurement, Reporting and Ensuring Compliance

General comment on Sydney Water's processes for measurement, reporting and ensuring compliance are set out in this section, as they are common to all the System Performance Standards (SPSs). For SPSs, the audit generally covered the aspects listed in Table 4-2. Items 1 to 4 in the Table are discussed below as they apply to all SPSs, while Items 5 and 6 are discussed separately for each Standard.

Table 4-3 Aspects Covered by the audit for the System Performance Standards

1.	Interpretation and application of the amended standards
2.	Existence of appropriate procedures, documentation and data collection, and reporting systems for the amended standards
3.	Compliance of Sydney Water with procedures and requirements
4.	A subjective evaluation by the auditor of the processes and procedures in place for identifying, assessing and recording events
5.	Analysis of performance compared to the standard and to historical performance where possible and relevant
6.	Strategies, plans and programs in place to ensure compliance with each standard is maintained in the future

Interpretation and application of the Amended Standards

Sydney Water's definitions and interpretations of the standard are generally consistent with the 2005-2010 Operating Licence. Sydney Water's interpretation and application of the standards are adequate.

Procedures, Documentation and Data Collection, and Reporting Systems

Sydney Water has maintained extensive documentation for collecting, collating and reporting of data for service standards under its Operating Licence.

Evidence of training manuals and improvements for staff and training attendance were provided. Sydney Water has process maps for both field and office crews. Manuals produced included the *"WAMS Rebate User Manual"* and a manual for field crews, that was very user friendly for staff, as it contained pictures of the computer screens, GIS maps with polygons and clear instructions for the processes to be followed.

Sydney Water outlined its quality assurance processes for field crew data collection, data entry and data analysis and provided evidence in the form of audit and action reports.

Documentation was regularly updated and version control was evident with dates on all documentation. The auditor was also provided with high quality Standard Operating Procedure (SOP) documentation.

Compliance of Sydney Water with Procedures and Requirements

Management and compliance staff demonstrated a sound understanding of the measurement and reporting process relevant to their responsibility.

The 2006/07 Operating Licence Compliance Report included comparison of historical performance for SPSs, brief trend analyses and explanations of the reasons for the results. The analysis provides a useful and sufficient context for stakeholders.

In general, the process of monitoring and reporting is considered to be reasonably reliable based on a subjective evaluation by the auditor of the processes and procedures in place for identifying, assessing and recording events.

Accuracy and Confidence Limits of Reported Numbers

IPART and Sydney Water reached an agreement that Sydney Water does not have to undertake auditing for accuracy and confidence of the SPSs for the 2006/07 reporting year.

In order to have some confidence in the reported numbers, the auditor again gave some consideration to *subjective* assessments of the accuracy of the reported data. Specific aspects are discussed below for each SPS.

4.4.2 Drinking Water Pressure

Accuracy and Confidence Assessment

Assessing this audit component against the agreed interpretation in the M&R Protocol, Sydney Water provided evidence of the Water Pressure Folio of Progress, which detailed important aspects such as:

- Operations and maintenance;
- Short term pressure fluctuations; and
- Performance Records.

Considering the procedures, documentation and systems in place, the information provided by Sydney Water was adequate, given the performance for the standard.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water has operational and maintenance procedure and processes to enable the compliance standards. Such measures include the following matters.

- Permanent and temporary pressure gauges are positioned widely throughout the systems to monitor system performance and detect areas that fail to meet pressure standards.
- Integrated Instrumentation Control Automation and Telemetry System (IICATS) is used to constantly monitor and control reservoirs and pumping stations to optimise system performance and maintain system capability during system demand changes and/or asset failures.

Capital Programs include the following matters:

- Installation of approximately 215 new pressure-recording gauges throughout the system with direct interface with IICATS, which was completed in October 2006. These will replace chart pressure gauges and expand an existing pressure recording gauge system.
- Upgrade and calibrate critical water hydraulic models to improve determination of system capability and plan amplifications.
- In August 2001, the Sydney Water Board of Directors also approved a program of pressure improvement works to address more intractable system problems affecting properties, often in small

pockets. This program is nearing completion and a review of new/residual repeat problem areas is underway with a view to a possible program extension, if required.

Summary

Sydney Water fully complies with the requirement for not more than 15,000 properties affected by water pressure failure in a financial year.

4.4.3 Drinking Water Continuity (unplanned and *"Planned and Warned"*)

Accuracy and Confidence Assessment

Sydney Water provided evidence of:

- Folio of Progress;
- Field Reporting and Maintenance Guides;
- Water Continuity Guidelines;
- Priority Change Results;
- Electronic Records;
- Job Cards; and
- Temporary Water Supply Connections.

Considering the procedures, documentation and systems in place and the information provided by Sydney Water, the auditor is satisfied that the methods used are adequate.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water report the upward trend for planned and unplanned water interruption is primarily due to:

- Sydney Water's priority to respond to main breaks and leaks;
- Long drought and resultant soil condition; however, rainfall over last few months of 2006/07 and wetting of soil is estimated to help to reduce the problem; and
- Sydney Water's enhanced emphasis on water mains renewal program.

Sydney Water will monitor, analyse and review the upward trend (if any) and associated root causes and take appropriate plan and actions.

In 2006/07 the property to mains connectivity project was incorporated into the Sydney Water's GIS. There is capability in the HYDRA to relate the asset to the land parcel and to customers within it. Currently Sydney Water is checking, rationalizing, and validating the property count relating assets and land parcel. Users training in the information systems has continued in WSCM and the Customer and Community Relations Division (CCRD). A hybrid approach consisting of HYDRA, polygon and manual physical inspection has commenced in 2007/08 to count the number of properties impacted, accurately.

The issue of multiple events due to a single asset failure has been addressed through the implementation of the AMD SO Water Continuity Guidelines, which have been implemented in partnership with all levels management of WSCM including training field crews to scheduler. This process will go through independent process inspection and or audits.

Summary

Sydney Water fully complies with the standard requirement for no more than 35,000 properties affected by an *"unplanned water interruption"* exceeding five hours and no more than 32,000 properties affected by a *"planned and warned"* interruption exceeding five hours.

4.4.4 Sewage Overflows

Accuracy and Confidence Assessment

Sydney Water provided evidence of:

- Folio of Progress;
- Monthly chokes over past five years impacting properties inspected;
- Choke summary 2006/07;
- CP Report data;
- Long term monthly properties affected events affecting properties;
- Average properties affected by each event 2001/02 to 2006/07;
- Sydney Water NWI Repair Time for chokes for 2006/07;
- Sydney Water Sewerage Networks Choke Management Strategy, 31 Oct 2005; and
- Job Cards.

Based on the evidence provided on the compliance processes, procedures, documentation and systems in place, the auditor is satisfied that the methods used are adequate for this audit. However changes are recommended in order to stop the increasing trend of sewage choke in order to comply next year.

Strategies, Plans and Programs to Ensure Compliance

The higher incidence of choke events in 2006/07 resulted in increased numbers of both single and multiple properties affected. Multiple occupancy properties continue to influence this standard, from the total 13,340 sewage overflow events, which affected 24,924 properties, 36 of these events affected 3,300 multiple occupancy properties.

A Choke Management Strategy is currently being implemented, a major component is reducing the risk from sewage main failures affecting high-rise multiple occupancy properties.

Sydney Water has been targeting land parcels having more than 50 properties on them and has identified 71 km of sewer line containing such properties. Sydney Water has already inspected 37 km sewerage line out of this identified 71 km. Sewer rehabilitation programmes will be developed based on these inspections.

Sydney Water has changed its sewerage inspection strategy to undertake CCTV inspection first and then choke removal or sewer cleaning and/ or rehabilitation (if necessary). Sydney Water's main focus is on minimising repeat sewer overflows on properties.

Sydney Water advises that some 75-80% of blockages are caused by tree roots seeking out moisture and entering pipes from leaks in pipe joints and cracks. Older pipe materials with mortar joints and rubber rings are more subject to leakage and consequent tree root problems than newer materials. Sydney Water believes large 'problem' trees throughout Sydney are causing a largely random pattern of

choke occurrences across approximately 23,500 kilometres of the sewer network. Additionally, tree roots entering private sewers are penetrating Sydney Water sewers, and the ability to clean and rehabilitate these private sewers is an ongoing issue. It is estimated these intrusions account for at least 30% of chokes in Sydney Water sewers. Sydney Water also mentioned that it is difficult to remove trees due to council guidelines.

Sydney Water are being proactive in prioritising inspections in terms of the age, type of pipe and amount of tree cover. For example, Sydney Water has been targeting clay pipes greater than 10 years old, laid less than 2.5 m deep and with intervention from tree roots around them, as these seem to be the most vulnerable to sewer chokes.

Summary

Sydney Water reported 24,924 uncontrolled dry weather sewage overflows on private properties. This is very close to the target set in the standard of 25,000 and is higher than last year when 22,572 properties were affected. There has been an upward trend since 2003/04, and if the trend continues, next year the standard has the potential to be exceeded.

Based on the procedures, documentation and systems in place, and the information provided by Sydney Water, the auditor notes that future compliance is difficult to predict. If the current trend continues there could be a non-compliance next year. The auditor recommends that Sydney Water develop additional strategies to ensure future compliance with this standard or that Sydney Water investigate the cost and benefit of expanding the Choke Management Strategy to target the next bracket of multiple properties (which is 30 to 49 dwellings per property). Sydney Water's Sewerage Networks Choke Management Strategy (Oct 2005) estimated the average capital cost (per choke reduced), could cost $4,150 to $10,800 per property affected.

4.4.5 Water Leakage

Accuracy and Confidence Assessment

Sydney Water provided evidence of:

- Folio of Progress;
- Summary Sheet for leakage benchmarking in Australian Water Utilities; and
- Bulk water flowmeter operational completion checklist.

In 2006/07, leakage was estimated to be 44.3 GL/year or 121.3 ML/d. This figure is higher than 2005/06 performance when 116.7 ML/d was the estimated leakage. Given the uncertainty band on leakage, as calculated by annual water balance, is estimated to be ±25% (95% confidence limit) these values are comparable. It is also noted that in 2006/07 Sydney Water adopted the WSAA default value of 2 per cent for customer meter under-registration, which resulted in the 2005/06 figure being revised from 123 to 116.7ML/d.

Considering the procedures, documentation and systems in place, and the information provided by Sydney Water, the auditor is satisfied that the methods used are adequate.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water provided an assessment of its progress that outlined its continued use of strategies to improve water leakage reduction and improvements increase confidence in the economic level of water leakage figures.

The methods used to improve water leakage performance include:

- Sydney Water's active leak detection program;
- Pressure management program;
- Bulkwater flowmeter installation program; and
- Improved water supply area boundary management.

Sydney Water is progressing with additional active leak detection, which is predicted to deliver about 7-8 ML/d additional savings towards the 2009 target.

Although Sydney Water is progressing towards its June 30 2009 target of 105 ML/d, it claimed that the calculation of real loss utilises quarterly average data over a year, therefore Sydney Water claim the calculation of the target 105 ML/d by June 2009 will not be established until 12 months after June 2009. Given that to-date, Sydney Water have been reporting performance at the end of each financial year for the annual licence compliance review, unless agreement to the altered reporting date is obtained with IPART and the Minister, this may result in a non-compliance. It is noted that if Sydney Water continue to track the trend line as currently reported, then a sufficiently robust analysis/case can be made for the auditor to form an opinion for the 2008/09 audit on whether Sydney Water achieved the required target within the required time.

Sydney Water has attributed the change in water leakage to the *'Active Leakage Detection Program'* which resulted in an increase in the length of water main inspected from 4,400 kms in 2002/03 to 18,000 kms in 2005/06 & 2006/07. Inspection processes include the use of sophisticated acoustic and electronic equipment to scan the water network. This method helps to identify hidden leakage and carry out repairs to leaks. The *Active Leakage Detection Program* is estimated to have achieved a total sustainable reduction of 57ML/d since implementation, with the remainder of the savings attributed to other methods, such as improved response times to leaks and breaks.

Table 4-4 Progress towards meeting 2009 leakage target

Leakage Level (ML/D)	2005/06	2006/07	2007/08	2008/09	2009/10
Timetable	137.0	128.0	118.0	105.0	
Actual Results	116.7	121.3	-	-	

Summary

The 2006/07 target for leakage level for Sydney Water was 128.0 ML/d. Sydney Water achieved a leakage level of 121.3 ML/d which, while higher than the 2005/06 result of 116.7 ML/d, is well within the error band for the calculation. Additionally, Sydney Water has revised its estimation method for customer meter under-registration and adopted the WSAA default value of 2 per cent for customer meter under-registration), which has resulted in a change of Infrastructure Leakage Index (ILI) figures. The ILI figure is a measure of leakage performance relative to other water infrastructure organisations. It is noted that

Sydney Water has not sought approval from IPART on this change, however, these defaults are generally considered acceptable by the industry.

Sydney Water report that the calculation of real loss utilises quarterly average data over a year, therefore the calculation of the target of 105 ML/d by June 2009 will not be able to be established until 12 months after June 2009. This may result in a non compliance if Sydney Water do not notify the Minister and come to an agreement of the measurement of this performance standard.

4.4.6 Response Times to Water Main Breaks

Accuracy and confidence Assessment

Sydney Water provided documentation of processes and practices for collecting and reporting water main breaks, bursts and leaks and the corresponding repair times.

Documentation included:

- Folio of Progress;
- Job Cards;
- Sydney Water priority change screen & audit sheets.doc; and
- Details of non-compliance with response times.

Considering the procedures, documentation and systems in place, and the information provided by Sydney Water, the auditor is satisfied that the methods used are adequate.

It is noted that some degree of ambiguity exists between the interpretation, and interplay, of Clause 14.13.1 (c2), which requires SWC to stop water losses on 100% of all Priority 4 break/leaks jobs within 5 days, and Clause 14.13.4, which recognised "…*that Sydney Water will not be able to respond to 100% of the priority 4 jobs within 5 days..."* and, in effect, provide an exceptions report for this *"Non Compliance".* This ambiguity should be clarified, between Sydney Water and IPART, and included in Sydney Water's in the Monitoring and Reporting Protocol, and a recommendation to this effect has been made.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water's improved performance for 2006/07 has been achieved through better processes and response management such as:

- Reallocation of work crews between water and wastewater activities;
- Improved resource management during the periods of high workloads, such as drawing resources from adjoining maintenance areas or reassignment of some corrective maintenance tasks to construction crews;
- Delaying lower priority planned works;
- Increased overtime;
- Low risk maintenance tasks outsourced; and
- Re-start the response clock when a break/leak has been priority upgraded.

Summary

Overall, Sydney Water obtained high compliance with this standard, as there was compliance for all criteria, except one (100% of jobs within 5 days – Sydney Water obtained 96%). The results for the individual requirements are as outlined below.

- Priority 6 breaks/leaks:
  70% of jobs within 2 hours—Full Compliance (Sydney Water achieved 86.9%)
  90% of jobs within 3 hours— Full Compliance (Sydney Water achieved 94.2%).
- Priority 5 breaks/leaks:
  65% of jobs within 3 hours—Full Compliance (Sydney Water achieved 71%)
  85% of jobs within 6 hours—Full Compliance (Sydney Water achieved 92.6%).
- Priority 4 breaks/leaks:
  50% of jobs by end of next working day—Full Compliance (Sydney Water achieved 79.6%)
  100% of jobs within 5 days—High Compliance (Sydney Water achieved 96%)

4.4.7 Ministerial requirement for leakage reduction

Accuracy and Confidence Assessment

Sydney Water provided evidence of the signed-off flow meter operational completion checklist of all flow meters to date (43 installed by June 2007) and the status (either operationally complete or flow meter not yet operational). This was consistent with the Compliance Report and Folio of Progress. Sydney Water was also required to implement 14 pressure control zones, and had implemented 12 by June 2007 and the remaining two by the time of the compliance audit.

Strategies, Plans and Programs to Ensure Compliance

The methods used to improve water leakage performance include:

- Sydney Water's active leak detection program;
- Pressure management program;
- Bulkwater flow meter installation program; and
- Improved water supply area boundary management.

Considering the procedures, documentation and systems in place, and the information provided by Sydney Water, the auditor is satisfied that the methods used are adequate.

Summary

Sydney Water fully complies with the Ministerial requirement to achieve the revised flow meter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006. This includes the installation of 40 flowmeters before 30 June 2007 and installation of the remaining 28 flowmeters before 30 September 2008. Sydney Water reported a total of 43 flow meters installed and operational at June 30 2007. Design of the remaining 25 is complete and materials ordered. It is forecast that all 68 flowmeters will be operational by September 2008 as per the revised target. Sydney Water also completed implementation of the 14 required pressure zones by the time of the audit.

4.4.8 Ministerial requirement for clarification of leakage response times

Accuracy and Confidence Assessment

Sydney Water produced evidence of:

- Folio of Progress; and
- Priority Change Results.

Considering the procedures, documentation and systems in place, and the information provided by Sydney Water, the auditor is satisfied that the methods used are adequate.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water proposed the following the review of the Monitoring and Reporting Protocol in April 2007, *"If the assessed priority is higher than the job priority, the response time will restart from the time of the assessment. If the assessed priority is lower than the job priority, the response time will continue from the time of the original caller notification and compliance will be measured pursuant to the assessed priority." Sydney Water is awaiting comment from IPART on its proposed amendments to the Monitoring and Reporting Protocol."*

Sydney Water has implemented the change in priority. Sydney Water also produced documentation on the difference in reporting figures as a result of the changes with report specifications to re-start the response clock when a break/leak job has its priority upgraded

Summary

Sydney Water fully complies with the Ministerial requirement to implement the change in priority procedures and Sydney Water also produced documentation on the difference in reporting figures that resulted.

4.4.9 Trend Analysis of Sydney Water System Performance Indicators

The service quality and system performance indicators have been considerably revised for the 2005/06-2009/10 Operating Licence. Therefore only limited trend data can be reported for years 2005/06 & 2006/07. Table 4.5 shows the available data for 2002/03-2006/07. Where comparable data is unavailable for previous years the cells have been *greyed out*. The table can be built upon, in future audits, so that trends can be analysed.

Table 4-5 Comparison of System Performance Indicators

Indicators	Indicator Parameters	2002/03	2003/04	2004/05	2005/06	2006/07
Water Continuity						
2-1. Water Continuity – Planned Number of properties affected by shut-offs in a report year that are:	<1 hour				2,952	1340
	>1 hour but ≤ 5 hours	76,264	81,919	67,481	79,210	90,885
	>5 hours but ≤ 12 hours	20,132	15,968	8,527	14,038	17,292
	>12 hours but ≤ 24 hours	98	96	0	182	0
	>24 hours	0	0	0	0	0
	Total				96,382	109,517
2-2. Water Continuity – Unplanned Number of properties affected by shut-offs in a report year that are:	<1 hour				150,675	156,980
	>1 hour but ≤ 5 hours	253,332	201,125	198,915	265,639	247,037
	>5 hours but ≤ 12 hours	18,976	15,983	18,292	26,306	26,238
	>12 hours but ≤ 24 hours	604	362	751	1,336	3,247
	>24 hours	0	0	171	163	107
	Total				444,119	433,609
3. For the total Frequency of Planned Water Interruption and Unplanned Water Interruptions	(a) Average number of properties which experienced Planned and Unplanned water interruption (no.)				0.32	0.32
	(b) Average time of a water interruption (min)				146	157
	(c) Average time period customers experienced water interruptions (min)				46	50
4-1. Number of properties which experienced unplanned	2 interruptions				58,115	11,247
	3 interruptions				14,989	1,659
	4 interruptions				4,393	98
	5 or more interruptions				2,005	146
	Total				79,502	53,954

Indicators	Indicator Parameters	2002/03	2003/04	2004/05	2005/06	2006/07
4-2. Number of properties which experienced planned	2 interruptions				9,443	12,920
	3 interruptions				1,443	3,905
	4 interruptions				173	1,969
	5 or more interruptions				0	11,247
	Total				11,059	30,041
5. Frequency of main breaks	Number of bursts and leaks per 100km of water mains resulting in the main being shut down (no/100km				35.19	31.32
Note: The 2003/04 Unplanned Total for water continuity events reported in the 2003/04 Operating Licence Compliance Report included the Planned and Warned interruptions.						
Water Leakage Management						
6. Losses from the water system	ML				42,606	44,261
7. Response time to breaks 7-1. Average time taken to respond to breaks, bursts and leaks resulting in mains being shut down (min).					663	522
7. Response time to breaks 7-2. Rate of compliance with response times for different leak categories	Priority 6 – % of jobs within 2 hours				72	70
	Priority 6 - % of jobs within 3 hours				84	90
	Priority 5 – % of jobs within 3 hours				58	65
	Priority 5 – % of jobs within 6 hours				80	85
	Priority 4 – % of jobs by end of next working day				67	50
	Priority 4 – % of jobs within 5 days, subject to clause 4.13.4				91	100

Indicators	Indicator Parameters	2002/03	2003/04	2004/05	2005/06	2006/07
Water Pressure						
8. Low water pressure 8-1. Number of properties which experienced water pressure failure	(a) Occasional or recurrent, but not permanent				2,519	1,070
	(b) Permanent low pressure				21	24
8. Low water pressure 8-2. Number of customer complaints relating to low water pressure	Where Sydney Water does not confirm the low water pressure failure or Sydney Water's systems do not identify that the Property has experienced low water pressure below the minimum pressure standard				34	55
9. Repeat low water pressure	Number of properties, which experienced more than one water pressure failure (not being properties in permanent low pressure areas):				1,865	584
Sewage Overflow						
10. Frequency of uncontrolled sewage overflows and properties affected	10-1. Number of Uncontrolled sewage overflows in Dry weather affecting private properties				12,746	13,340
	10-2. Number of Uncontrolled sewage overflows in Dry weather affecting public properties				7,718	7,840
	10-3. Number of Uncontrolled sewage overflows in Wet weather affecting private properties				26	155
	10-4. Number of Uncontrolled sewage overflows in Wet weather affecting public properties				50	334

Indicators	Indicator Parameters	2002/03	2003/04	2004/05	2005/06	2006/07
	10-5. Average number of Properties (other than Public properties) experiencing an Uncontrolled Sewage Overflow in Dry and in Wet Weather calculated as the total number of Properties (other than Public Properties) experiencing an Uncontrolled Sewage Overflow in Dry and in Wet weather divided by the total number of Properties				0.01	0.01
11. Repeat sewage overflows 11-1. Number of properties (other than Public properties) which experienced more than one Uncontrolled Sewage Overflow in Dry weather	(a) 2 occasions (b) 3 or more occasions				1,566 232	1,702 157
Indicator 11 - Repeat sewage overflows 11-2. Number of properties (other than Public properties) which experienced more than one Uncontrolled Sewage Overflow in Wet weather	(a) 2 occasions (b) 3 or more occasions				0 1	49 27
11. Repeat sewage overflows 11-3. Number of public properties which experienced more than one Uncontrolled Sewage Overflow in Dry weather	(a) 2 occasions (b) 3 or more occasions				289 25	318 35
11. Repeat sewage overflows 11-4. Number of public properties experiencing more than one Uncontrolled Sewage Overflow in Wet weather	(a) 2 occasions (b) 3 or more occasions				5 1	31 8
12. Response times 12-1. Number of Priority 1 sewage overflows to which response time is	(a) ≤ 1 hours (b) >1 hour	4,040* 1,740*	3,015* 1,365*	2,681* 1,500*	1,100 1,362	2,816 1,648

Indicators	Indicator Parameters	2002/03	2003/04	2004/05	2005/06	2006/07
12. Response times 12-2. Number of Priority 2 sewage overflows to which response time is	(a) ≤ 3 hours	23,910**	19,206**	20,500**	16,292	17,480
	(b) >3 hour	5,067**	4,163**	6,357**	11,298	9,312
13-1. Restoration time	Average time taken by Sydney Water to restore full normal sewerage service from the commencement of Uncontrolled sewage overflows that occurred in Dry weather (min)				401	342
14. Frequency of breaks and blockages	14-1. No of sewer main breaks and blockages per 1000 properties				12.17	12.51
	14-2. Percentage of sewer main breaks and blockages caused by tree roots				75	78.6
	14-3. No of property connection sewer breaks and blockages per 1000 properties				0.14	0.14
	14-4. Percentage of property connection sewer breaks and blockages caused by tree roots				53	58.10

**Old priority 6 (new classification: priority 1)*

*** Old priority 5 (new classification: priority 2)*

Figure for 6. losses from the water system 05/06 has been amended with the new figures (44,906 to 42,602ML)

4.5 External Factors Affecting Compliance

External factors considered to have affected compliance during the year:

- Urban consolidation and high-rise development will continue to put pressure on sewage overflow figures.

4.6 Key Recommendations

It is recommended that:

R4.1 Sydney Water analyze the extent of work it is undertaking under the Choke Management Strategy, and the corresponding levels of risk in failing to ensure future compliance with the

sewage overflow standard, and report to IPART by 31st March 2008 on its findings in the context of the (2006) *Proposed System Performance Standard*.

R4.2 Sydney Water clarifies with IPART the ambiguity between *'Response Time to Water Main Breaks'* clauses (vis. Clauses C4.13.1 (c2) and 4.13.4) and includes the outcome in its *Monitoring and Reporting Protocol*.

4.6.1 Secondary Recommendations

Nil

5. Water Quality

5.1 Summary of Findings

- **Drinking Water Quality – Standards**

  Sydney Water obtained **Full compliance** with respect to the quality of treated drinking water supplied to customers. The water quality supplied is, generally, of an excellent standard and complies with the health related requirements of the *Australian Drinking Water Guidelines (1996)*, the current *Australian Drinking Water Guidelines (2004)* and the aesthetic related requirements of NSW Health and the Minister. (A summary of results for a key indicator is shown in Table 5-1).

- **Drinking Water Quality - Monitoring**

  Sydney Water has prepared an *Annual Drinking Water Quality Monitoring Plan* for the water supply systems to monitor health-related and aesthetic-related water quality parameters and to demonstrate compliance with the Guidelines. The Plan has been prepared in accordance with the Licence requirements and has been endorsed by NSW Health.

  Sydney Water obtained **Full compliance** with respect to considering and including the concepts of risk minimisation practices and systems management in the operation of its water supply.

  Sydney Water obtained **Full compliance** with respect to monitoring in accordance with the *Annual Drinking Water Quality Monitoring Plan*. Sydney Water maintains an effective system of quality assurance for monitoring, sampling, testing and reporting on the Plan.

- **Drinking Water Quality – Reporting**

  Sydney Water obtained **Full compliance** for the preparation of reports on the results of water quality monitoring and water quality improvement. Quarterly reports of monitoring results were prepared and are available on the Sydney Water website.

- **Drinking Water – Planning**

  Sydney Water prepared a *Five Year Drinking Water Quality Management Plan 2005-2010* in November 2005. Sydney Water obtained **Full compliance** for the preparation of a report in 2006 – 2007 on the implementation of the Plan, and **Full compliance** for reporting on actions that have been identified in the Plan. No further improvements to the Plan itself were identified in the report. Because of the occurrence of an algal bloom in Warragamba Reservoir, Sydney Water advises that an in-depth review of the risk and requirements for control will be carried out in the next audit period, and that this may lead to improvements in the Water Filtration Plant systems for treating possible toxins and taste and odour compounds that can result from such blooms.

- **Drinking Water – Incident Management**

  Sydney Water has prepared a *Drinking Water Quality Incident Management Plan*.

- **Other Grades of Water**

  Sydney Water obtained **Full compliance** with the requirements for *"supply of other grades of water"* for the Rouse Hill recycled water scheme, and other schemes, with the most critical

parameters complying with requirements and a continuous program of improvement in place. Cross connections had been identified in previous years and Sydney Water has carried out an intensive inspection program to eliminate cross connections. No further cross connections were identified in 2006 – 2007.

Table 5-1 Water Quality Performance for *E. coli*: Water Delivery Systems

Delivery System	2003/2004	2004/2005	2005/2006	2006/2007
	At least 98% of samples shall contain no Thermo-tolerant Coliforms (or alternatively *E. coli)*[1]			
North Richmond	99.5	99.6	100	100
Orchard Hills	100	99.8	99.8	99.8
Prospect South	100	100	100	100
Prospect North	99.9	100	99.9	100
Prospect East	100	99.8	100	100
Ryde	100	100	100	100
Potts Hill	100	100	99.8	100
Warragamba	100	100	100	100
Nepean	100	100	100	100
Macarthur	100	100	100	100
Illawarra	100	100	100	100
Woronora	100	100	100	100
Cascades	100	100	100	99.6
Combined Systems	99.9	99.9	99.9	99.9

The location of Sydney Water's filtration plants is illustrated in Figure 1-3.

5.2 Summary of Requirements

The objectives of Part 3 of the Operating Licence are to ensure that Sydney Water:

a) Supplies drinking water that is safe and meets appropriate guidelines;

b) Supplies other grades of water in a manner that is safe to the end users and meets appropriate guidelines;

[1] From 1 July 2003 reporting on thermotolerant coliforms within Sydney Water was replaced by reporting *E. coli*

c) Is abreast of emerging water quality issues and engages the community in the development of future water quality goals; and

d) Has in place appropriate strategies and management plans that minimise risks and ensure continual improvements in its operation.

To meet the requirements of Part 3, Sydney Water is required to undertake the following tasks.

- Supply treated drinking water to customers that complies with the health and aesthetic related requirements of the Australian Drinking Water Guidelines (2004) and the fluoridation plant operating targets set out in the Fluoridation Code.
- Prepare a comprehensive Annual Drinking Water Quality Monitoring Plan to monitor health-related and aesthetic-related water quality parameters to demonstrate compliance with the Guidelines. The sampling frequency and locations chosen for monitoring should be such that the results are representative of the water quality supplied to customers.
- Undertake monitoring in accordance with the Plan.
- Prepare a quarterly report on the health-related and aesthetic-related monitoring results, make the report available free of charge and include it on the Sydney Water website.
- Prepare a five-year Drinking Water Quality Management Plan. The preparation of this Plan is to include public consultation and strategies for the comprehensive management of drinking water quality, to minimise risk to public health and to meet aesthetic guidelines.
- Prepare an annual report on the implementation of the five-year Plan, including details of proposed amendments and additional water quality improvement actions identified during the previous year.
- Maintain the existing Drinking Water Quality Incident Management Plan, until any new plan is developed in agreement with NSW Health.
- Supply other grades of water, such as water for reuse, in accordance with relevant guidelines and requirements of government agencies.

Note that only some of these requirements are subject to audit in 2006-2007. The clauses subject to audit are listed in Table 5-2

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5.3 Details of Compliance

Table 5-2 Licence Part 3 – Water Quality

Clause	Requirement	Compliance	Findings
3.1 - Drinking Water Quality – Standards			
3.1.1	Sydney Water must comply with:		
3.1.1 (a)	The Australian Drinking Water Guidelines 1996 relating to Health guideline values and the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc.	Full compliance	As noted in the previous operational audit, Sydney Water has adopted the more recent 2004 revision of the *Australian Drinking Water Guidelines* (ADWG) for compliance purposes, against the health guideline values and the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc. This adoption was formalised through the Sydney Water - NSW Health Memorandum of Understanding (MoU) in February 2006. With the exception of Total Coliforms, compliance with the Health and specified Aesthetic guideline values listed in the ADWG 2004 will achieve compliance with ADWG 1996 for the parameters of most importance for the Sydney Water systems. In the case of Total Coliforms, the ADWG 2004 does not include guidelines on the basis that Total Coliforms do not provide a measure of direct health significance, whereas the ADWG 1996 do provide Total Coliform guidelines. Review of the reported results indicates that the water complies with the health parameters and the nominated aesthetic parameters for both ADWG 2004 and ADWG 1996. There were some exceptions in individual results noted during the year for *E. coli*, pH and iron, however, these were minor and were less in number than in 2005/2006, and were well within the Guidelines for an excellent water supply. In carrying out the analyses, Sydney Water has used laboratories that have current accreditation with NATA for the analyses undertaken. A review of an audit carried out by NATA of Sydney Water's laboratory for microbiological

Clause	Requirement	Compliance	Findings
			testing indicated that the laboratory had attended to issues raised and had maintained its accreditation. ADWG 2004 does not require compliance with Total Coliform guidelines, although this was a requirement of the ADWG 1996 guidelines. Sydney Water advised the auditor that it still undertakes Total Coliform analyses for operational purposes, but did not provide the auditor with a report on the results of these analyses. It was noted in the previous audit that while Sydney Water's reporting of the results compares the measured results with the Guideline level, it does not indicate to the reader what percentage of exceptions can be accepted. Sydney Water advises that they will improve this aspect of reporting; however, it has not been incorporated in the 2006/2007 reporting. Review of the records indicates that where exceptions occurred, Sydney Water advised NSW Health and carried out additional check monitoring, as necessary.
3.1.1 (b)	The fluoridation plant operating targets set out in the Fluoridation Code.	Full compliance	The results reported to NSW Health show that dosing of fluoride was within the specified range for all systems with the exception, on a few occasions, where fluoride was dosed at less than the specified range for some systems. The auditor notes that for the purposes of confirming compliance with the Code, it is the fluoride results from the outlet of the WFP that are relevant and exceptions for these monitoring results are reported to NSW Health. The quarterly monitoring results are those that relate to samples taken from customer taps and relate to Clause 3.3. 3 of the Operating Licence. With respect to fluoridation, the primary requirement is to avoid overdosing, and short periods of underdosing would not be expected to be of concern. Overall it is considered Sydney Water has achieved full compliance with this requirement.
3.1.3	In delivering the Services, Sydney Water must have regard to the concepts of good practice set	Full compliance	With respect to applying the concepts of good practice for water quality management, Sydney Water has adopted the 2004 ADWG as agreed with

Clause	Requirement	Compliance	Findings
	out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health		NSW Health. The ADWG 2004 is based on a new framework for assuring water quality that improves upon the 1996 Guidelines. The previous audit carried out a high level review of the systems that Sydney Water has in place, and concluded that the approach being adopted is consistent with the concepts of good practice outlined in the ADWG 2004. Important aspects of Sydney Water's management practices include the following. Working with its supplier of bulk water, the Sydney Catchment Authority, to ensure that the bulk water quality is consistent with the requirements necessary for the subsequent treatment by Sydney Water's treatment plants to achieve treated water that meets the requirements of the ADWG 2004. Effective management of the treatment plants in accordance with the principles outlined in the ADWG 2004. Monitoring of water quality in the distribution system and at customers' taps. Use of the Framework for Management of Drinking Water Quality outlined in ADWG 2004 to structure its *Five-Year Drinking Water Quality Management Plan (2005 – 2010*.
3.3 – Drinking Water Quality – Reporting			
3.3.1	Sydney Water must produce a quarterly report that includes the water quality monitoring test results undertaken in accordance with clause 3.2. The quarterly report must be placed on its website on the internet and also made available for access by any person, free of any charges imposed by Sydney Water.	Full compliance	Sydney Water produces a quarterly report of all monitoring test results undertaken in accordance with the Drinking Water Quality Monitoring Plan and makes it available, to the public, on the Sydney Water website. In the case of Total Coliforms, the quarterly report to 30 June 2007 does not include a listing of Total Coliform results, and reporting has been in accordance with the Clause 3.2 (ie this complies with the requirements of ADWG 2004 rather than ADWG 1996, as agreed with NSW Health).

Clause	Requirement	Compliance	Findings
3.3.2	Sydney Water must provide to NSW Health a copy of the report compiled to comply with clause 3.3.1. If the results do not comply with the Health guideline values or the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc, Sydney Water must provide NSW Health with an appraisal of the inconsistency, and indicate action to be taken to resolve any non-compliance. *[Note: The requirement for quarterly reporting of monitoring results is also found in the Memorandum of understanding between NSW Health and Sydney Water, November 2000.]*	Full compliance	Sydney Water provided a copy of the reports compiled under Clause 3.3.1 to NSW Health on 23 May 2007. Where exceptions occurred and this constituted an incident, the reporting provided by Sydney Water indicated that NSW Health was advised until the issue was resolved. NSW Health advises that it considers that Sydney Water is in compliance with the requirements.
3.3.3	Sydney Water must comply with requests by NSW Health to provide additional information on water quality. The additional information provided under this clause is to conform to the manner and form specified by NSW Health. *[Note: Under section 10H of the Public Health Act 1991 the Director General of NSW Health may require Sydney Water to produce certain information.]*	Full compliance	Sydney Water meets regularly with NSW Health and SCA (for example the Joint Operational Group (JOG) and the Strategic Liaison Group (SLG)) to discuss operational matters and strategic and policy issues relating to water quality management. Minutes of the JOG meetings during 2006 – 2007 provide evidence of a close working relationship with NSW Health and SCA and the discussion of a wide range of issues relating to drinking water quality. Observations by the auditor over several years indicates that there is free exchange of information between these organisations related to system performance and water quality and on exceptions/incidents/events. Information related to the latter is generally provided via the secure Incident Reporting Website. NSW Health advised the auditor that it considers that Sydney Water has met its public health obligations under the Operating Licence.

Clause	Requirement	Compliance	Findings
3.4 – Drinking Water – Planning			
3.4.4	Sydney Water must prepare, and make available to NSW Health by 1 October each year, an annual report on the implementation of the Five Year Plan. The report must include details of:	Full compliance	A report titled *Implementation of the five-year drinking water quality management plan 2005-2010* was prepared in September 2006 and provided to NSW Health by 1 October 2007. NSW Health has advised the auditor that it is very satisfied with the report. In addition, Sydney Water provided a report titled *Annual Report 2006 – 2007 Implementation of the five-year drinking water quality management plan 2005-2010* dated 25 September 2007. While after the audit period, this report is helpful in detailing drinking water quality improvements that took place during 2006-2007.
3.4.4 (a)	Any proposed amendments to the Five Year Plan needed to protect public health or to ensure the effective operation of the Plan.	Full compliance	Sydney Water advised that, in consultation with NSW Health, it has not proposed any amendments to the existing Five Year Plan and, as such, the Annual Report 2006-2007 does not identify amendments that are required to the Five Year Plan, although the Annual Report does identify improvements that will be implemented to ensure good water quality. Sydney Water advises that it expects that some improvements will be identified and included in the 2008-2009 Implementation Plan as a result of a proposed review of risk associated with a persistent algal bloom in Warragamba Reservoir.
3.4.4 (b)	Any additional water quality improvement actions identified in the preceding year through the Drinking water quality monitoring data or by NSW Health and action taken to implement them.	Full compliance	The Five Year Plan includes programs of review and improvement, with improvement works being identified and implemented in response to issues that are identified through the review process. The Annual Report 2006 – 2007 *Implementation of the five-year drinking water quality management plan 2005 – 2010* dated 25 September 2007 outlines drinking water quality improvements that took place during 2006 – 2007. It is clear from the range of actions listed that Sydney Water is undertaking a continuing program of water quality improvement. The auditor found it difficult to identify from the Annual Report whether all improvement actions identified in the preceding year had been implemented, and some of the actions that were identified as being planned to be completed

Clause	Requirement	Compliance	Findings
			in 2006 – 2007 could not be located in the report. This is illustrated in Section 5.5.2 of this audit report. It was also not clear from the report as to the responsible organisation (eg whether Sydney Water or Sydney Catchment Authority). It is recommended that in future the report provide a Table that clearly shows whether planned actions have been completed or not, and the responsible party. Because this was a new requirement the auditor considers that Sydney Water has achieved compliance with clause for 2006 - 2007, although further improvement in reporting is required if full compliance is to be maintained in subsequent audits.
3.6 – Other Grades of Water			
3.6.1	Other grades of water supplied by Sydney Water must be supplied according to relevant guidelines specified by NSW Health, DEC[2], DIPNR[3] and the Department of Primary Industries.	Full compliance	This clause relates to off-site reuse of water and not on-site reuse (for example at STPs). The Other Grades of Water include: (unfiltered) raw water (this particularly relates to a supply for Bluescope Steel); residential recycled water (such as at Rouse Hill); industrial recycled water (such as that supplied to Bluescope Steel); and the use of reclaimed water for irrigation (for example for golf courses, under controlled and uncontrolled situations), Sydney Water has the objective of complying with the minimum requirements outlined in relevant State or National guidelines for specific end uses of recycled water, including the following: NSW Recycled Water Coordination Committee *"NSW Guidelines for Urban and Residential Use of Reclaimed Water"* 1st Edition, May 1993 (for example, for Rouse Hill Recycled Water Scheme); National Water Quality Management Strategy (ARMCANZ, ANZECC, NHMRC) *"Guidelines for Sewerage Systems – Use of Reclaimed Water",* November 2000 (for example, for golf courses and some industrial applications); and

[2] Now DECC

[3] Now Department of Water and Energy

Clause	Requirement	Compliance	Findings
			DEC (NSW) Environmental Guidelines *"Use of Effluent by Irrigation, October 2004"* (for example, for golf course and agricultural irrigation). Sydney Water assesses compliance for its particular recycled water scheme in terms of whether the compliance monitoring results meet the requirements specified in these guidelines. In 2006/07 the monitoring data tabulated in the Annual Compliance reports showed: 100% compliance for the irrigation and agricultural schemes; and 100% compliance for the Rouse Hill scheme. In particular, it is noted that the *E. coli* results were in full compliance (non-compliance with respect to pathogen content can be expected to represent the greatest risk in these schemes). NSW Health advises that it considers that Sydney Water has complied with the public health obligations under the Operating Licence. On this basis, it is concluded that full compliance has been achieved. Further discussion is included in Section 5.6 of this report on the applicable guidelines and requirements for compliance. There have been new guidelines issued for water recycling, and Sydney Water is working with NSW Health to implement these guidelines. It also not clear to the auditor as to whether compliance should be measured only in terms of monitoring results or whether other requirements of the guidelines should be taken into account; this needs to be clarified.
3.6.2	Other grades of water supplied by Sydney Water does not include Drinking water but does include Re-use water.	No requirement	Sydney Water does not include drinking water in this category of 'Other grades of water'.
3.6.3	Where there is a conflict between any of the guidelines, requirements or standards applying to Sydney Water under clause 3.6, the Minister's decision will prevail.	No requirement	To date there has not been a conflict between the various guidelines that has required the Minister to make a decision on the guidelines that are to be followed.

5.4 Discussion

5.4.1 Drinking Water Quality

As noted in previous audits, the quality of drinking water supplied to customers is generally of an excellent standard and complies with the health related requirements of the current *Australian Drinking Water Guidelines* (ADWG 2004) and the aesthetic related requirements specified by NSW Health and the Minister. NSW Health advised the auditor that it considers that Sydney Water has met its public health obligations under the Operating Licence and Memorandum of Understanding.

Information provided by Sydney Water in its report *Implementation of the five-year drinking water quality management plan 2005-2010* provides a summary of the situation with respect to customer satisfaction during 2006-2007. The information supports the conclusion that the water is of an excellent quality. Customers were asked: "How do you rate the overall quality of the drinking water that comes out of your taps on a scale from zero to ten, with zero being extremely unfavourable and ten being extremely favourable?". In total, 62% of customers surveyed gave Sydney Water a score between 8 and 10, with only 7% of customers surveyed giving a score between zero and four.

This is a new measure introduced by Sydney Water and is not compared with previous results; however, a review of customer complaints shows that there is a reducing trend in numbers of complaints, reducing from more than 8,000 customer complaints in 1999-2000 to less than 2,000 in 2006-2007, with the numbers of complaints in 2006-2007 being the lowest over the period data has been provided.

In January 2007 there were a number of complaints associated with taste and odour in the Illawarra system; advice from NSW Health indicates that this event did not represent a risk to human health and was caused by taste and odour compounds that originated in the catchment. Sydney Water consulted with NSW Health and has commenced a project to assess the ability of the filtration plants to remove algae and taste and odour compounds.

In June 2007 heavy rains gave rise to increased turbidity entering Warragamba Dam. There has been concern that heavy rains might give rise to water quality problems; however, the water filtration plants met targets for turbidity and disinfection during this incident.

5.4.2 New Guidelines for Drinking Water Quality

As noted in the previous audit, Sydney Water has adopted the *Australian Drinking Water Guidelines 2004* for compliance purposes rather than the 1996 Guidelines. This has been agreed with NSW Health.

The 2004 Guidelines introduce a new Framework for drinking water quality management. The emphasis is on providing safe water through avoiding problems and applying good management, rather than relying on verification of water quality through monitoring.

While the guideline levels set for individual constituents are generally similar to the 1996 Guidelines, the 2004 Guidelines emphasise the use of thermotolerant coliforms *(E. coli)* rather than Total Coliforms as an indicator that the water is free of potentially harmful pathogens. Sydney Water advises it still monitors Total Coliforms for operational purposes, but no longer includes the results in its public reporting.

The previous audit carried out a high level review of Sydney Water's systems against the 12 elements of the Framework and concluded that, in broad terms, Sydney Water's drinking water quality management system is in good agreement with the requirements of the Framework.

In March 2006 Sydney Water assisted WSAA to field test the *Water Quality Framework Continuous Improvement Assessment tool* ("Aquality") by applying it to Sydney Water's Integrated Drinking Water Quality Management System. Aquality has the objective of assisting water authorities efficiently assess their water quality management system processes against the 12 Elements of the Framework. The purpose of the pilot was to test the methodology and measures contained within Aquality. The audit was conducted by a WSAA working party. Sydney Water advises that it achieved a final overall score of 92%, and the pilot trial indicated that the assessment methodology was rational and effective. Although the objective of the trial was not principally to audit SWC's processes, it supports the conclusion that Sydney Water has in place management systems that address the requirements of the elements in the Framework for the Management of Drinking Water.

The five-year drinking water quality management plan and the annual reports prepared by Sydney Water on the implementation of the actions arising are structured in terms of the 12 elements of the Framework. This is good and shows how there is a program of continuous improvement in water quality, and how this relates to the elements of the Framework.

5.4.3 Water Quality Risks and their Management

Sydney Water has in place a program to identify possible water quality problems, to assess the risks to water quality, and to manage these risks. This is carried out jointly with the Sydney Catchment Authority and NSW Health.

In 2006-2007 Sydney Water advised that it carried out risk reviews of all of its Water Filtration Plants, as part of its program of continuing risk assessment and risk management.

Variation in the quality of bulk water supplied by Sydney Catchment Authority is a key area of risk. Variation can arise, for example, by the water inflows associated with drought breaking rains, and it has been a consideration in previous audits as to whether Sydney Water could demonstrate adequate management of this risk.

In 2006-2007 major works were carried out to provide a higher level of assurance that raw water of good quality can continue to be supplied during such events. These are reported on in the *Annual Report on the Implementation of the Five-Year Drinking Water Quality Management Plan*, and included:

- Development of protocols for transferring water between Upper Avon and Nepean Dams, resulting in the ability to transfer water between the two dams without relying on pumps; and
- Completed construction of the new, larger Raw Water Pumping Station at Prospect Reservoir, providing an alternative water source during adverse water conditions at Warragamba Dam, and planning for commissioning of the Pumping Station is underway.

At the time that this audit was being carried out, Warragamba Reservoir was experiencing a major bloom of blue green algae. While blue green algae can be associated with algal toxins, Sydney Water advises that the toxicity of this bloom has not been of concern, and control of the depth at which water off take occurs has been able to avoid effects on the aesthetic quality of water supplied to customers.

Notwithstanding this, the occurrence of the bloom has been unexpected and the auditor sought to determine if Sydney Water's hazard identification and risk assessment measures had identified the potential for the problem and had adequately prepared Sydney Water for dealing with the issue. The complexity of the issue and the information able to be provided by Sydney Water did not permit a conclusion to be reached on this and, as the event is outside the current audit period and is ongoing, it was not appropriate to focus on this particular issue for the current audit. Sydney Water noted that, as part of its normal processes of review and continuous improvement, it expected that the issue would be the subject of an in-depth review in 2007-2008.

It is recommended that this review take place, and that the review should include an assessment of the adequacy of Sydney Water's hazard assessment and risk management processes for dealing with such issues. Because Sydney Water has indicated it would be undertaking this review as a matter of course under its normal management processes, the auditor has included the recommendation as a secondary recommendation (rather than as a primary recommendation) of this audit.

With respect to assuring that pesticides used in the Sydney Catchment Authority catchments are not present in the raw water supplied to Sydney Water's treatment plants, Sydney Water advises that Sydney Catchment Authority has assessed the use and risk associated with various pesticides, and proposes to increase monitoring to include 2,4,5-T, Diazinon, Malathion, Mecoprop, Metasulfuron, MCPA and Glyphosate. An analysis of the detections of pesticides that have occurred to date indicates that the measured concentrations in the bulk water supplied to treatment plants are well below the health guideline values for drinking water, and that after treatment will be at lower concentrations, and are not present at concentrations of concern in the raw water supplies.

5.4.4 Joint working with NSW Health and SCA

Sydney Water has established a good working relationship with NSW Health and the Sydney Catchment Authority. This relationship provides confidence that issues requiring joint consideration by these organisations, will be properly dealt with. A review of the minutes of the Joint Operational Group indicated that a wide range of water quality issues were discussed during 2006 - 2007.

5.4.5 Incident Management

Sydney Water has a well-established Incident Management Plan and has tested this Plan on a number of occasions in previous years. It was not a requirement of the 2006-2007 audit to review the Plan.

5.5 Factors Affecting Compliance

5.5.1 Changing Bulk Water Quality

The quality of water supplied to customers is of an excellent standard and complies with the health related requirements of the 2004 Australian Drinking Water Guidelines and the aesthetic related requirements specified by NSW Health and the Minister.

As previous Operational Audits have noted, Sydney Water has in place excellent systems for the management of drinking water quality and, through its various risk management procedures, has identified where risks to drinking water quality may arise and is developing strategies to manage these risks. Sydney Water and SCA are working together through various committees and joint activities such as the risk assessments, and are specifically considering how the catchment systems and resulting bulk

water quality interface with Sydney Water's treatment plants. This is important in ensuring that the overall water supply system works effectively and will provide water of assured quality. It is important when considering whether the water supplied to customers will continue to comply with requirements.

5.5.2 Drinking Water Quality Improvement Program

In December 2005 Sydney Water prepared a *Five Year Drinking Water Quality Management Plan 2005 – 2010.* This document provides a summary of the water quality issues and strategies that Sydney Water is taking to address the issues. This Plan will be important in continuing to maintain the quality of the drinking water and to reduce the potential for non-compliance in the future. NSW Health advises that it considers that the Plan provides a sound template for implementing the requirements of the ADWG 2004.

In September 2006 Sydney Water prepared its first report on the implementation of the Plan, titled *2005-2006 Annual Report on Implementation of the Five-Year Drinking Water Quality Management Plan 2005-2010,* and in September 2007 Sydney Water prepared its second annual report on the implementation of the Five Year Plan, titled *2006 – 2007 Annual Report on Implementation of the Five-Year Drinking Water Quality Management Plan 2005 - 2010.* These reports allow an appreciation of the Improvement Plan and how it will function in the future in encouraging continuous improvement in water quality. While the strategy for many of the elements of the Framework is to simply continue the programs that have been established, the programs include periodic review to identify issues, to identify appropriate actions, and then to implement these actions. NSW Health advises that it is very satisfied with the Annual Report.

Clause 3.4.4(b) requires that the annual report include reporting on any additional water quality improvement actions identified in the preceding year through the drinking water quality monitoring data or by NSW Health and action taken to implement them. As a check on this, various actions listed in the 2005 – 2006 report that had a completion date in 2006 – 2007 have been listed in Table 5-3, together with the action reported in the 2006 – 2007 report. This indicates that, while many of the actions have been completed, it is not clear from the report as to the status of a number of the actions. It is recommended that reporting be improved to avoid this lack of clarity. Note that this check uses only information from the reports – it is possible that actions have in fact been completed and just not reported on.

Overall, the reporting by Sydney Water provides evidence that there is a considerable body of work being carried out to improve drinking water quality.

Table 5-3 Status of Actions identified for completion in 2006 – 2007 based on the 2006 – 2007 report

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
Hazard Identification and risk assessment	The 2005-2006 annual risk reviews for all Sydney Water operated plants were completed with the exception of Nepean WFP. This assessment was due for completion in September 2006.	Completed 06/07 risk reviews for all Sydney Water operated WFPs.	Completed

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
	A need was identified to refine and integrate risk assessment process. A standard administrative procedure (SAP) is being developed to review the existing methodologies in relation to risk assessment and to develop an integrated risk assessment procedure that will incorporate all levels within the business, aimed for completion by February 2007.	Not reported on. Note: Sydney Water advised the auditor that this action was superseded by the revision of the Corporate Risk Management Framework in 2006 – 2007, with action completed in 2006 – 2007, and that the status of this action had been left out of the report by mistake.	Status not clear from report
	Risks to water quality from cross connections at the Water Filtration Plants: Cross-connection audits were completed at all SWC WFPs with recommendations implemented at North Richmond, Warragamba, Nepean and Orchard Hills WFPs. A final audit report for Cascades is still pending. This work is approximately 70 per cent complete and was expected to be finalised by December 2006.	To be completed in 2007 – 2008.	Continuing
	Construction of a Raw Water Pumping Station to pump the required quantity to meet daily demand has commenced and was scheduled to be completed by October 2007.	Completed construction of the new, larger, RWPS at Prospect Reservoir, providing an alternative water source during adverse raw water conditions at Warragamba Dam.	Completed
	Risks to drinking water quality due to interruption of the power supply to WFPs due to bush fire, fire in plant or by any other reason: A proposal is in progress (approximately 15 per cent complete) to provide an alternate source of power supply to the Macarthur WFP and this is due for completion in December 2008.	To be completed in 2007 – 2008.	Continuing

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
	Warragamba WFP by-pass arrangement: There is a risk that contamination of the treated water could occur with the raw water due to the existing by-pass arrangement being a single valve. An option study has been completed and has recommended a new by-pass arrangement with an air gap and spool piece. Design is in progress. The project is approximately 20 per cent complete, aiming for completion by December 2006. Macarthur WPF - failure of pipeline due to mining activities: Mitigation measures have been planned for areas at risk of predicted failures. Negotiations were carried out with BHPB and a master agreement was reached regarding future monitoring and corrective actions. The 'Macarthur Pipeline Master Agreement' was endorsed by the General Manager, Asset Management Division on 8th July 2005.	Not reported on. Note: Sydney Water advised the auditor that this action is under review and is subject to funding availability, and is not planned for completion in 2007 – 2008.	Status not clear from report
	Not identified[4].	Protocols were developed for transferring water between Upper Avon and Nepean dams, resulting in ability to transfer water between the two dams without relying on pumps.	
Preventive measures and multiple barriers	Not identified[5].	Completed the Mulgoa, Wallacia and Silverdale Sewerage Scheme, improving water quality in the Hawkesbury-Nepean River. A revised Sydney Water Disinfection Management Strategy, based on the Australian Drinking Water Guidelines 2004 management framework was completed	

[4] Sydney Water advised the auditor that these actions, which may be planned or unplanned, were identified and completed during the year, and were captured in the report.

[5] As preceding footnote.

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
		May 2007. Improved the security, especially alarms, at key sites such as water filtration plants and key reservoirs and pumping stations.	
Critical control points	North Richmond WFP: installation of a rapid mixer to improve coagulation is included in the 2006-2007 capital expenditure program.	Not reported on. Note: Sydney Water advised the auditor that this action is under review and is subject to funding availability, and is not planned for completion in 2007 – 2008.	Status not clear from report
Critical control points	Sydney Water Disinfection Management Strategy 2001-2006: a revised strategy is to be developed November 2006, based on new Australian Drinking Water Guidelines 2004 management framework.	Produced a revised Sydney Water Disinfection Management Strategy, based on the Australian Drinking Water Guidelines 2004 management.	Completed
	Security risks: completion of a project to address increased security risks to water filtration & network facilities, scheduled for completion by July 2007. Drinking Water Quality Threat Management Protocol joint development with NSW Health and the SCA: A Drinking Water Quality Threat Management Protocol flow chart is being reviewed by NSW Health and the SCA. Consultation with NSW Police is under way to confirm if the protocols are compatible and satisfactory in dealing with threats to the supply.	Continued consultation with NSW Police for planning an exercise testing the jointly developed Drinking Water Quality Threat Management Protocols. Improved the security, especially alarms, at key sites such as WFPs, key reservoirs and pumping stations.	Largely completed
	Backflow prevention: final completion of program involving the installation of valves to prevent backflow at a further 6 Sydney Water sewage pumping stations.	RPZ (Reduced Pressure Zone) assemblies were installed at seven sewage pumping stations. The program of backflow prevention at sewage pumping stations was completed June 2007 with a total of 638 installations.	Completed

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
Operational procedures	Optimisation of performance at Sydney Water operated water filtration plants: the 2006 self-assessment is in the planning stage.	Completed the 2005/06 self-assessment on the performance of Sydney Water operated WFPs.	Completed
	Reservoir disinfection: an operational trial linking reservoir operating protocols and system demand forecasts was carried out for Prospect North delivery system and the findings are being reviewed and further work was being planned, aiming for completion by June 2007.	To be completed in 2007 – 2008.	Continuing
Operational monitoring	Improvement actions related to 'Operational monitoring' – continue existing program.	Completed the 2006-2007 Annual Drinking Water Quality Operational Monitoring Plan.	Completed
Corrective action	Cascades delivery system – fluctuations in chlorine: Fluctuations in chlorine levels were noted in the Cascades delivery system. The solution to resolve this issue is to provide flow pacing for chlorination when in automatic mode. Finalisation of the project was suspended pending completion of the Blackheath rising main. The chlorine sample off-take will be relocated and a sample pump installed. This work is currently in progress and is estimated as 80 per cent complete with a scheduled completion date of December 2006. Cascades delivery system – unlined mains and fittings: Unlined mains and fittings have been identified as the cause of higher levels of turbidity and iron in the water in some areas of the Cascades delivery system. This results in customer complaints and dissatisfaction with water quality. Remedial action consists of the renewal of unlined mains and fittings where necessary to improve water quality. During the 2005-2006, 1751 metres of water main between Katoomba and Springwood were renewed. Further renewals were to be carried out during the 2006-2007.	Not reported on. Note: Sydney Water advised the auditor that this action is under review and is subject to funding availability, and is not planned for completion in 2007 – 2008.	Status not clear from report

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
	Proposed to reduce the pH set point at the outlet of the WFPs where feasible.	A reduction in pH exceptions and the mean pH level has been observed since the strategy of reducing pH set points at the WFPs was implemented.	Completed
	Orchard Hills delivery system – proposed to install dosing hatches at key reservoir sites in the 2006-2007.	Dosing hatches were installed at key reservoir sites to enable calcium hypochlorite tablet dosing.	Completed
Equipment capability and maintenance	Re-chlorination plants reliability and operation: improved reliability of operation of in-system re-chlorination plants and implemented actions from hazard analysis.	The chlorine dosing point at Chatswood Reservoir was relocated to improve chlorine mixing and improve reliability of the Chatswood Rechlorination Plant. Implemented an improved control algorithm at Potts Hill Rechlorination Plant resulting in improved process control capability. Provided a backup chlorine dosing pump at Hornsby Rechlorination Plant resulting in a reduced reliability risk. Provided backup pumps at Ingleburn Rechlorination Plant to reduce reliability risk under both choramination top-up or breakpoint chlorination regimes. Installed concentrated sodium hypochlorite storage tanks at five smaller rechlorination plants to reduce the frequency of deliveries and associated chemical supply risk.	Completed
	Common to all WFPs – equipment maintenance: a higher level Treatment Operations document is currently being prepared to summarise the total process in relation to equipment maintenance - to be completed by December 2006.	Not reported on. Note: Sydney Water advised the auditor that this action was superseded by the revision of the System Plans for Water Filtration Plans, and that the status of this action was left out of the report by mistake.	Status not clear from report

Element	Actions identified for completion in 2006 – 2007	Reported Status of Actions in 2006 – 2007	Conclusion
Materials and chemicals	Development of quality plans for water treatment chemicals including risk assessment and control, due to be completed in October 2006. A long-term contract for supplying polymer is currently under development. This is estimated as being 60 per cent complete and is due for completion by December 2006.	Directly involved in the production of Chapter 8 of the 2004 NHMRC Australian Drinking Water Guidelines titled *'Drinking water treatment chemicals'.* Continued developing quality plans for water treatment chemicals including risk assessment and control. Long-term contract for supplying polymer was let in May 2007	Completed

5.6 Other Grades of Water

5.6.1 General

Other Grades of Water supplied by Sydney Water to customers included: (unfiltered) raw water (this particularly relates to a supply for Bluescope Steel); residential recycled water (such as at Rouse Hill); industrial recycled water (such as that supplied to Bluescope Steel); and the use of reclaimed water for irrigation (for example for golf courses, under controlled and uncontrolled situations).

Over the past four years, there has been an increase in the savings provided for through recycled water schemes, increasing from 2,953 ML/year in 2002/03, to 8,810 ML/year in 2006/07.

Sydney Water is undertaking a range of initiatives to increase the extent of off site-reuse and reduce demand on the potable water resource. Information on these initiatives is included in the Sydney Water report *Water Conservation and Recycling Implementation Report 2006-2007*. In particular, in 2006-07 the following gains were made.

- Commissioning of the major BlueScope Steel scheme in September 2006, with 4.3 GL of water having been recycled by the end of June 2007. It is projected that BlueScope Steel will use around 20 ML of recycled water a day, reducing the draw on water from Avon Dam by about 18 %.
- Further connections to stage one of the Rouse Hill recycling scheme, with the number of connections expected to total 17,500 properties by the end of 2007. By using recycled water over the past six years, Rouse Hill customers have used 28 % less drinking water compared to households without access to recycled water.
- Commissioning of a small scheme to provide recycled water to irrigate Council playing fields at Penrith in early 2007.

In addition, during 2006 – 2007 Sydney Water was involved with the following activities.

- Carrying out works to increase the capacity of the Rouse Hill Recycled Water Plant, with an upgrade to the Plant to allow enable 4.7 billion litres of wastewater to be recycled each year for residential use. The project is expected to be completed in late 2008.

- Developing the Hoxton Park scheme, served by a recycled water plant at Glenfield, and a recycled water scheme at Ropes Crossing near St Marys.
- Planning for the construction and operation of the Western Sydney Recycled Water Initiative. One component of this initiative is to provide recycled water via dual reticulation to around 160,000 new homes to be built in new suburbs in Sydney's north west and south west Growth Centres.
- Augmenting the existing Wollongong recycled water scheme to service additional industrial and irrigation demands.

5.6.2 Applicable Standards

Sydney Water has the objective of complying with the minimum requirements outlined in relevant State or National guidelines for specific end uses of recycled water, and the guidelines that Sydney Water particularly considers are:

- NSW Recycled Water Coordination Committee *"NSW Guidelines for Urban and Residential Use of Reclaimed Water"* 1st Edition, May 1993 (for example, for Rouse Hill Recycled Water Scheme);
- National Water Quality Management Strategy (ARMCANZ, ANZECC, NHMRC) *"Guidelines for Sewerage Systems – Use of Reclaimed Water",* November 2000 (for example, for golf courses and some industrial applications);
- DEC (NSW) Environmental Guidelines *"Use of Effluent by Irrigation, October 2004"* (for example, for golf course and agricultural irrigation); and
- *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006* (NRMMC, EPHC, AHMC).

The last of these guidelines is new, and Sydney Water is working with NSW Health to develop a Recycled Water Quality Management Plan to facilitate the implementation of these guidelines for all new recycled water schemes.

For compliance purposes, Sydney Water particularly considers the monitoring requirements and guideline levels outlined in the first three of these guidelines. However, the Operating Licence has the broad requirement: “Other grades of water supplied by Sydney Water must be supplied according to relevant guidelines” and this raises the question of whether compliance should consider the new guidelines (for example, *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006)*, and whether the requirement is only that the monitoring results must comply with certain requirements, or whether all the requirements of these guidelines should be complied with. It is recommended that Sydney Water clarify this requirement with the relevant regulatory agencies.

Relevant to this, Sydney Water provided the auditor with a checklist showing how Sydney Water’s systems comply with the requirements of the guidelines; this provides confidence that the supply of recycled water can be expected to meet the broad requirements of the guidelines. However, an example of the detailed considerations that can arise is whether for compliance purposes it is only the results of monitoring for *E. coli* that should comply, or whether the monitoring should show that there be no pathogens in the recycled water (for example, all monitoring results for pathogens such as Cryptosporidium and Giardia should be negative or, where positive, the results should be followed up to show that the results are indicative of inactivated rather than viable organisms).

5.6.3 Performance

The previous Operational Audits reviewed the systems that Sydney Water has in place to assure performance of its supply of 'Other grades of water' and concluded that management of the supply of recycled water is being carried out in accordance with good management principles. Sydney Water has implemented a *Water Product Management System and a Monitoring Process Management System* that comply with the requirements of ISO 9001:2000. The systems were independently audited in December 2006 to confirm compliance with ISO9001; the audit report noted one non-compliance however this was not related to the *Water Product Management System of the Monitoring Process System*. Sydney Water uses laboratories with a current NATA accreditation for the analyses carried out. Sydney Water issued an *Other Grades of Water Quality Monitoring Plan* for 2005/2006 on 30 May 2006, and revised the Plan for 2006/2007 on 1 May 2006.

In 2006/07, the monitoring data tabulated in the Annual Compliance Reports showed:

- 100% compliance for the irrigation and agricultural schemes; and
- 100% compliance for the Rouse Hill scheme.

The difficulty in assuring safe performance of recycled water schemes is evidenced in the occurrence of cross connections between potable water and recycled water in customer's premises. This has been a significant issue in previous years, and has led to checking of all premises to ensure that there are no cross connections. In 2006-2007 there were no further occurrences of cross connections, indicating the benefits of the considerable program of work that has been undertaken.

5.7 Recommendations

5.7.1 Key Recommendations

There are no primary recommendations.

5.7.2 Secondary Recommendations

It is recommended that Sydney Water:

R3.1 Consult with NSW Health to determine the requirements for compliance under Operating Licence Clause 3.6.1 with the new *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006)*; Sydney Water should clarify whether the requirement is only that the monitoring results must comply with certain requirements, or whether all the requirements of the various guidelines should be complied with.

R3.2 Undertake an in-depth review of the circumstances relating to the algal bloom in Warragamba Reservoir and the requirements for control of such an event. It is further recommended that this review include an in-depth assessment of the adequacy of Sydney Water's hazard assessment and risk management processes for identifying and establishing management strategies for such issues.

R3.3 Include in its annual report on implementation of water quality improvement actions, a Table that clearly shows whether planned actions have been completed or not, and the responsible party.

6. Environment - Indicators and Management

6.1 Summary of Findings

Sydney Water provided a copy of a briefing note to the Minister and report entitled "*Pilot Metering Project Multi-Unit Individual Cold Water Metering Progress Report – 8 September 2006".*

Sydney Water indicated that it had progressed the implementation of the plan.

Other requirements in complying with 'Environmental Indicators and Management' (vis Part 7 of the Operating Licence) had been audited in the previous year.

6.2 Summary of Requirements

Part 7 of the Operating Licence refers to the requirements regarding environmental indicators and environmental management, a summary of which is provided below. To comply with Part 7 of the Operating Licence, Sydney Water must undertake the following tasks.

1. Monitor, record, compile data and report on performance against the environmental performance indicators (EPIs) in Schedule 3, annually. The report must provide information which enables a year to year comparison in relation to Sydney Water's performance against the environmental performance indicators.
2. Have in place an environmental management system certified to AS/NZS IS0 14001.
3. Produce a five-year Environment Plan, which must be reviewed and updated annually in consultation with specified government and non-government bodies. Public consultation must be undertaken in developing the Environment Plan and the Plan must be publicly available, free of charge.
4. Report annually on its progress in meeting the requirements of the Environment Plan.
5. Ensure that potable water used for treatment processes at selected sewage treatment plants is reduced in accordance with nominated targets and that use of recycled water for treatment processes is increased.
6. Undertake potable water efficiency audits at selected sewage treatment plants and implement the findings under a water conservation plan.
7. Conduct a trial to determine the costs and benefits of metering water use in each unit of multi-unit buildings.

The 2006/07 audit scope included only Point 7 of the above, as the other points had been audited in the previous year.

6.3 Details of Compliance

Table 6-1 Licence Part 7 - Environmental Indicators and Management

Clause	Requirement	Compliance	Findings
7.4 - Metering of Individual Units			
7.4.1	Within 9 months of the commencement of this licence, Sydney Water must;		
7.4.1 (a)	Conduct at least one trial to determine the costs and benefits and to identify any impediments to providing for each unit in new multi-unit buildings to have an individual meter which is read on a quarterly basis.	Full compliance	Full compliance with this sub-clause was attained in the previous audit period.
7.4.1 (b)	Evaluate the outcomes of the trial and within 6 months of completion of the trial, provide a report to the Minister outlining the outcomes of the trial and Sydney Water's plans for future metering of units in multi-unit buildings.	Full compliance	Sydney Water provided a copy of a briefing note to the Minister and report entitled "*Pilot Metering Project Multi-Unit Individual Cold Water Metering Progress Report – 8 September 2006".* Sydney Water provided a report to the Minister outlining the outcomes of the trial and Sydney Water's plans for future metering of units in multi-unit buildings entitled, "*Metering Project for Individual Metering of Units in Multi-Unit Buildings".* The report was signed by the Managing Director and dated 28 September 2006. Sydney Water indicated that it had progressed the implementation of the plan as discussed in Section 6.4.1 of this report.

6.4 Discussion

6.4.1 Individual metering project of units in multi-unit buildings pilot project

Sydney water indicated that it has progressed in the implementation of the plans as follows, at the time of the audit:

Action Plan Reported to the Minister	Progress indicated by Sydney Water	Evidence provided by Sydney Water
Complete the fitting and testing of the data loggers at the Hornsby site.	This action has been completed.	Minutes of Multi-Unit Metering Pilot Project Steering committee meeting (19 April 2007) reports status of fitting and testing of the data loggers at the Hornsby site.
Resolve any problems associated with the use of data loggers.	This action is in progress and is scheduled for completion by the end of 2007.	Email correspondence between Sydney Water and its consultant was sighted.
Specify and estimate costs for necessary IT systems enhanced	Work request form has been drafted	Copy of the work request form was sighted.
Complete the assessment of costs and benefits.	Sydney water is currently developing a business case. A paper for funding allocation has been drafted.	Draft paper was sighted. Summary table illustrating comparison of water meters against other demand management initiatives was sighted.
Rank the cost to benefit ratio against other demand management initiatives.	Individual metering included in Demand Management comparison table.	As above.
Take the business case to the Board of Sydney Water for approval to proceed.	This had not proceeded at the time of the audit.	No evidence provided.
Draft potential changes to Sydney Water's metering policy.	This action has been completed.	Draft amendments to the Water Meter Fitting Policy to include multi-unit buildings were sighted.
Draft new requirements for inclusion in the development approval process.	This action has been completed.	A copy of the proposed amendment was sighted.
Develop a communication strategy for affected stakeholders.	This action had commenced.	A Draft communications strategy entitled "*Multi-unit metering project Communications Strategy – Draft October 2007*" was sighted.
Consult with IPART about the impact on charges to be levied on units and changes required to Sydney Water's Customer Contract.	Sydney Water has developed a draft submission to IPART	A Draft submission to IPART for *2008-09 price determination - Section 8 prices and activities 2007* was sighted. The submission made provision for charging for multi unit buildings.

6.5 Recommendations

6.5.1 Key Recommendations

Nil.

6.5.2 Secondary Recommendations

Nil.

7. Water Conservation and Demand Management

7.1 Summary of Findings

Water Conservation Target

The Water Conservation Target was not due for review in the 2006/07 audit, which has adopted a risk-based approach.

Demand Management Strategy

Overall, Sydney Water continued to demonstrate a high level of commitment to water conservation and demand management, having implemented and continued to plan programs and activities of a high international standard. Sydney Water's workforce and business processes were well versed on water conservation and demand management. This understanding was evident in its Corporate Plan (2006-2011); Sustainability Division Plan; Output/Actions and Responsibilities (2007/08); Environmental Management System (EMS) List of Significant Environmental Impacts 2006; and alignment of these plans with the Sydney Metropolitan Water Plan to achieve **Full compliance** for the Demand Management components of the Operating Licence.

The *Water Conservation and Recycling Implementation Report* (WCRIR) for 2006/07 demonstrated improving performance against the water conservation target (although not part of this years audit, as discussed above). Some 57 GL of potable water was saved in 2006/07, with consumption at 328 LCD corresponding to an estimated demand of 326 LCD including reasonable adjustments for the effects of weather on water usage against the 2011 target of 329 LCD.

Sydney Water is therefore on track to achieving the water conservation target despite concerns raised in previous years. It is noted the Operating Licence prior to 2005/06 required that compliance with the water conservation target should take account of *"an average year",* and this was interpreted to mean that the assessment of compliance against the water conservation target should be modified to eliminate the impact of water restrictions for periods, when such restrictions were in operation. The current Operating Licence makes no mention of the "average year" nor does it contain any requirement to modify assessment of compliance against the water conservation target to take effect of water restrictions. Although not part of the 2006/07 audit, progress towards the water conservation target (in Section 9.1of the Operating Licence), should be assessed to include climate correction but exclude any correction for the impact of water restrictions on water demand with achieved performance as reported above. The demonstrated significant progress towards the 2011 consumption target of 329 LCD (climate corrected) reduces concern of not meeting the target discussed in the 2005/06 audit report.

It is further noted that Sydney Water has continued to make significant water savings in addition to the effects from water restrictions. An estimated consumption of 389 LCD is reported in the WCRIR for 2006/07excluding the effects of water restrictions (albeit not a licence requirement). This represents a 43% improvement on potable water savings compared to 2005/06, which attained 400 LCD without restrictions.

Sydney Water's Draft Decision Support Manual review is to be finalised in December 2007. The Manual will begin to be rolled out to staff, in 2008, following revision based on a number of pilot applications of the Manual, including the South West Growth Centre Area Plan and the Warriewood System Plan. Sydney Water's planners, environmental and communications teams have participated in the pilot applications together with Sydney Water's consultants involved in integrated water management and water conservation studies. The implementation of *Sydney Water's Decision Support Manual* will provide a consistent approach to the development of sustainable water servicing strategies and will consolidate Sydney Water's commitment to give due consideration to demand side management in its future provision of services.

Reducing Discharges

Reducing Discharges is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Water Conservation rating and labeling

Water Conservation rating and labelling is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Review of Part 9 of Licence

Review of Part 9 licence is not for review in the 2006/07 audit, which has adopted a risk-based approach.

Minister's Requirements

Minister's Requirements are not for review in the 2006/07 audit, which has adopted a risk-based approach.

7.2 Summary of Requirements

Part 9 of the Operating Licence requires Sydney Water to comply with specific water conservation and demand management objectives. This is to ensure that Sydney Water achieves appropriate water demand reduction targets and implements water re-use to reduce the growth in total demand for potable water from catchment sources managed by the Sydney Catchment Authority (SCA).

In summary, to comply with the requirements of Part 9 of the Operating Licence, Sydney Water must:

1. take action to reduce the quantity of water it draws, in accordance with water conservation targets;
2. report to IPART on its progress in complying with water conservation targets;
3. consider demand side management as the basis of planning for future provision of services, including addressing water leakages;
4. provide a report to IPART annually on implementation of the demand management strategy;
5. engage a suitably qualified third party to verify the accuracy and soundness of mathematical models used to project future water demands and report the results to IPART;
6. meet the re-use water targets set by the Minister or Sydney Water;
7. generate re-use water from the sewage or effluent of customers and consumers;

8. report to IPART on its progress in meeting the re-use water target;

9. encourage manufacturers of water appliances to improve the water use efficiency of these appliances and report on these activities to IPART; and

10. report to the Minister on any specific matters requested.

The risk-based approach adopted for the 2006/07 audit does not require a review of items 1, 2, 5, 6, 7, 8, 9 and 10.

7.3 Details of Compliance

Table 7-1 Licence Part 9 - Water Conservation and Demand Management

Clause	Requirement	Compliance	Findings
9.1 – Water Conservation Target (Not audited)			
9.2 – Demand Management			
9.2.1	Sydney Water must give due consideration to demand side management as the basis for planning the future provision of its Services, including addressing Water leakage.	Full compliance	Sydney Water has given due consideration to demand side management of current and future service provision (including leakage management) as evidenced by it's Corporate Plan (2006-2011), Sustainability Division Plan, Output/Actions and Responsibilities (2006/07), EMS List of Significant Environmental Impacts 2006, and alignment of these plans with the Sydney Metropolitan Water Plan. *The Water Conservation and Recycling Implementation Report* (WCRIR) for 2006/07 demonstrated improving performance against the water conservation target (although not part of this years audit). Some 57 GL of potable water was saved in 2006/07, with consumption at 328 LCD corresponding to an estimated demand of 326 LCD including reasonable adjustments for the effects of weather on water usage against the 2011 target of 329 LCD. It is further noted that Sydney Water has continued to make significant water savings in addition to the effects from water restrictions included in the above amounts. An estimated consumption of 389 LCD is reported in the WCRIR for 2006/07, excluding the effects of water restrictions (although removal of the effects of water restrictions is not a licence requirement). This represents a 43% improvement on potable water savings compared to 2005/06, which attained 400 LCD without restrictions.

Clause	Requirement	Compliance	Findings
			Sydney Water's Draft Decision Support Manual review is to be finalised in December 2007. The implementation of Sydney Water's Decision Support Manual will provide a consistent approach in the development of sustainable water servicing strategies and will consolidate Sydney Water's commitment to giving due consideration to demand side management in its future provision of services.
9.2.2	By no later than 1 September each year, Sydney Water must provide a demand management strategy implementation report to IPART that reports on its implementation of its demand management strategy for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.	Full compliance	The WCRIR is Sydney Water's demand management strategy implementation report. The WCRIR was submitted to IPART before 1 September 2007 and reported on Sydney Water's implementation of its demand management strategy for 2006/07.
9.2.3	The demand management strategy implementation report must:		
9.2.3 (a)	Contain an estimate of past, current and projected water uses and distinguish between residential, industrial, commercial and government uses.	Full compliance	An estimate of past, current and projected water uses, distinguishing between residential, industrial, commercial and government uses, is presented in Appendix 3 of the WCRIR.
9.2.3 (b)	Describe the frequency and magnitude of expected supply deficiencies, including those arising as a result of wastage or loss, drought or emergency.	Full compliance	The frequency and magnitude of expected supply deficiencies, including those arising as a result of wastage or loss, drought or emergency are described in Appendix 2 of the WCRIR.
9.2.3 (c)	Identify conservation measures currently adopted and being practised.	Full compliance	Conservation measures currently adopted and being practised are identified in Section 2 of the WCRIR. The effectiveness of the Water Efficiency Labeling and Standards (WELS) program in 2006/07 was discussed, including recently increased rebates for internal plumbing connections for rainwater tanks (from $150 to $300 to $500-$1000), with early estimates indicating the uptake of

Clause	Requirement	Compliance	Findings
			internal connections has increased from 10% to 15%.
9.2.3 (d)	Describe, cost and evaluate additional conservation measures.	Full compliance	Additional conservation measures are described, costed and evaluated using non-economic criteria in Section 3 of the WCRIR. Sydney Water was able to demonstrate that adoption of particular water conservation measures depended on the relative cost effectiveness of the programs identified (Tables 11 and 12 of the WCRIR).
9.2.3 (e)	Describe future plans for water reclamation and strategies to alter water use practices, including those relating to the installation of more efficient water appliances and devices by users.	Full compliance	Future plans for water reclamation and strategies to alter water use practices, including those relating to the installation of more efficient water appliances and devices by users, are described in Section 3 of the WCRIR.
9.2.3 (f)	Evaluate these plans in terms of their cost and contrast with the cost of alternative water supplies.	Full compliance	Water reclamation plans are evaluated in terms of their cost and these plans are compared to alternative water supplies in Sections 1 and 3 of the WCRIR sufficient to achieve Full compliance for this condition. Although it is recognised that alternative water supplies should not necessarily compete directly with water conservation measures (as these provide a diverse portfolio with qualitative benefits reducing risks), it is nevertheless recommended that future reports compare alternative supply and conservation measures more directly using a common cost base, such as utility levelised cost, allowing a value to be placed on the risk reduction provided by alternative measures.
9.2.3 (g)	Prioritise and schedule the implementation of courses of action found to be cost effective.	Full compliance	Actions found to be cost effective are prioritised and scheduled for implementation in Section 3 and Appendix 5 of the WCRIR. Although not a Licence requirement, a summary table showing the program name and quantitative estimates of water saved, utility levelised cost and range of accuracy/risk (as a percentage of estimated savings) would be useful in future audits to track progress and the effectiveness of adopted programs.
9.2.3 (h)	Identify strategies for reducing Water leakage.	Full compliance	Strategies for reducing water leakage are identified in Section 2 and Appendix 7 of the WCRIR.

Clause	Requirement	Compliance	Findings
9.2.3 (i)	Include components of a water balance table consistent with the format and definitions in the IWA water table.	Full compliance	Components of a water balance table consistent with the format and definitions in the IWA water table are provided in Appendix 7, Table 17 of the WCRIR.
9.2.3 (j)	Include consumption of water across sectors in a format and content specified by IPART.	Full compliance	Consumption of water across sectors in a format and content specified by IPART are provided in Appendix 7, Table 18 of the WCRIR.
9.2.3 (k)	For each of the demand management activities of Sydney Water in the preceding financial year, report in a schedule in a format and content agreed between IPART and Sydney Water: (i) The planned and actual water savings and planned and actual expenditure; and (ii) The actual measures of outcomes for performance indicator	Full compliance	Each of the demand management activities of Sydney Water in 2006/07 are reported in a format and content agreed between IPART and Sydney Water in Appendix 6, Tables 15 and 16 of the WCRIR. The report includes planned and actual water savings and planned and actual expenditure as well as actual measures of outcomes for performance indicators.
9.2.4	At least once during this Licence, Sydney Water must engage a suitably qualified third party to verify the accuracy and soundness of its mathematical models for projecting future demands for water usage and report the results to IPART.	No requirement	Although no requirement exists for the 2006/07 Audit, Sydney Water noted that in 2005/06 the Institute of Sustainable Futures (ISF) at the University of Sydney commenced stage 2 of its review of Sydney Water's *End Use Model* (EUM). This involved the update of the stock models in the EUM and a major revision of the washing machine stock model followed by a complete recalibration of the model. A final report was received in February 2007.

7.4 Discussion

7.4.1 Demand Management Strategy

Sydney Water's Demand Management Strategy is considered to be inline with world's best practice, including a continuous improvement planning cycle. Sydney Water has demonstrated effective adaptive management in its continued adjustment of demand management programs towards its Water Conservation Target (albeit out of scope for this years audit). The WCRIR demonstrated improving performance against the water conservation target with an estimated demand of 326 LCD, including reasonable adjustments for the effects of weather on water usage, against the 2011 target of 329 LCD. Average demand without restrictions in place (albeit not a licence requirement) of 389 LCD demonstrates significant improvement in other water conservation measures compared with 400 LCD being the estimated demand without restrictions in 2005/06.

In 2005/06 and again in 2006/07, the strategy has been demonstrated to be effective comparing forecast verses actual water savings.

Sydney Water's Draft Decision Support Manual has been successfully trialled in a number of pilot applications involving Sydney Water planners, environmental and communications teams together with Sydney Water's consultants involved in integrated water management and water conservation studies. The release and implementation of Sydney Water's Decision Support Manual in 2008 will provide a consistent approach in the development of sustainable water servicing strategies and will consolidate Sydney Water's commitment to giving due consideration to demand side management in its future provision of services.

Although it is recognised that alternative water supplies should not necessarily compete directly with water conservation measures (as these provide diversity of supply and associated risk reduction), it is nevertheless recommended that future Reports compare alternative supply and conservation measures more directly using a common cost base such as utility levelised cost, allowing a value to be placed on the risk reduction provided by such alternative measures.

Similarly, a summary table showing the water conservation program name and quantitative estimates of water saved, utility levelised cost and range of accuracy/risk (as a percentage of estimated savings) would be very useful in future audits to track the progress and effectiveness of adopted programs.

7.5 Factors Affecting Compliance

Factors affecting compliance have been addressed in Section 10.4.1, Water Conservation Targets, of this report

7.6 Recommendations

7.6.1 Key Recommendations

Nil.

7.6.2 Secondary Recommendations

It is recommended that Sydney Water:

R9.1 Consider comparison of alternative supply and conservation measures more directly in future Water conservation and Recycling Implementation Report (WCRIRs) using a common cost base such as utility levelised cost.

R9.2 Consider including a summary table in future WCRIRs showing the water conservation program name and quantitative estimates of water saved, utility levelised cost and range of accuracy/risk (as a percentage of estimated savings).

Appendix A

Comparison of Sydney Water's Compliance Over Previous Years

Comparison of Sydney Water's compliance with previous Years

This Appendix provides a tabular comparison of the compliance levels attained by Sydney Water in the 2006/07 Audit period and over the four previous audit periods. As compliance for this audit period was assessed against the 2005/2010 Operational Licence and three of the previous years audits related to the 2000/05 operational licence, Table A-1 aligns the findings of this years and the 2005/06 audit with the "best fit" licence clause from the previous licence. Many clauses are worded differently within the two licences, hence the table should be used as a guide only. The table also shows those clauses that were not included in the 2006/07 scope of work.

Definitional Licence Clauses have been excluded.

It is evident from Table A-1 that for the auditable Licence conditions for this audit period, Sydney Water:

- Demonstrated Full compliance with those clauses audited against with only a few exceptions. In most cases, the rating of Full compliance is a continuation of a Full compliance in 2005/06;
- Continued to achieve Full compliance with all *Drinking Water Quality* requirements;
- Achieved Full compliance with all *Infrastructure Performance* requirements with the exception of the requirement for calculation of levels of water leakage using IPART approved methodologies and assumptions, for which compliance fell from Full (2005/06) to High (2006/07);
- Achieved Full compliance with the *Environmental – Indicators and management* requirement (note that only one clause was audited against).
- Continued to achieve Full compliance with all the *Water conservation and demand management* requirements.

Table A- 1 Operating Licence - Summary of Compliance with the previous Licence

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
3	**WATER QUALITY**			**6**			
3.1	**Drinking Water Quality - Standards**			**6.2**			
3.1.1(a)	Comply with Australian Drinking Water Guidelines (1996) relating to Health guideline values and Aesthetic guideline values.	**FULL**	**FULL**	6.2.1(a)	**FULL**	**FULL**	**FULL**
3.1.1(b)	Comply with operating targets set out in the Fluoridation Code	**FULL**	**FULL**	**No Corresponding Clause**			
3.1.2	Health guidelines will prevail where there are inconsistencies	**NR**	**FULL**	**No Corresponding Clause**			
3.1.3	Have regard to the concepts of good practice set out by the guidelines and must apply the concepts as specified by NSW.	**FULL**	**FULL**	6.2.2	**FULL**	**FULL**	**FULL**
3.2	**Drinking Water Quality – Monitoring**			**6.3**			
3.2.1	Prepare an Annual Drinking Water Quality Monitoring Plan by 31 March each year.	**Desktop**	**FULL**	6.3.1	**FULL**	**FULL**	**FULL**
3.2.1(a)	The plan must include system performance monitoring in the Plan to ensure quality control	**Desktop**	**FULL**	6.3.2	**FULL**	**FULL**	**FULL**
3.2.1(b)	The plan must have regard to the concepts of good practice set out by the guidelines and must apply the concepts as specified by NSW.	**Desktop**	**FULL**	**No Corresponding Clause**			
3.2.1(c)	The plan must include the monitoring of health guideline values	**Desktop**	**FULL**	6.3.2(a)	**FULL**	**FULL**	**FULL**
3.2.1(d)	The plan must include the monitoring of aesthetic guideline values	**Desktop**	**FULL**	6.3.2(b)	**FULL**	**FULL**	**FULL**
3.2.1(e)	The plan must assess the quality of drinking water	**Desktop**	**FULL**	6.3.4	**FULL**	**FULL**	**FULL**
3.2.1(f)	The plan must be undertaken from the commencement date to 30 June 2006 and each subsequent financial year.	**Desktop**	**FULL**	6.3.5	**FULL**	**FULL**	**FULL**
3.2.2	Sampling frequency and locations must be representative of quality of water supplied	**Desktop**	**FULL**	**No Corresponding Clause**			
3.3	**Drinking Water Quality - Reporting**			**6.4**			
3.3.1	Make monitoring results publicly available and on website and available for access free of charge	**FULL**	**FULL**	6.4.1	**FULL**	**FULL**	**FULL**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
3.3.2	Produce an Annual Drinking Water Quality Report to NSW Health to comply with clause 3.3.1	**FULL**	**FULL**	6.4.2	**FULL**	**FULL**	**FULL**
3.3.3	Must comply with requests from NSW Health to provide additional information	**FULL**	**FULL**	**No Corresponding Clause**			
3.4	**Drinking Water – Planning**			**6.5**			
3.4.1	Prepare a 5 year Drinking Water Quality Management Plan within 5 months of commencement date. Release to the public a discussion paper within 2 months and must engage in public consultation.	**Desktop**	**FULL**	6.5.1	**NR**	**NR**	**NR**
3.4.2	Include Management Strategies in Plan	**Desktop**	**FULL**	6.5.2	**NR**	**NR**	**NR**
3.4.3	In preparing the plan have regard to concepts of good practice set out in the 1996 Guidelines	**Desktop**	**FULL**	**No Corresponding Clause**			
3.4.4	Sydney Water must prepare, and make available to NSW Health by 1 October each year, an annual report on the implementation of the Five Year Plan. The report must include details of:	**FULL**	**NR**	**No Corresponding Clause**			
3.4.4(a)	Prepare a report on any proposed amendments	**Desktop**	**NR**	6.5.3	**FULL**	**FULL**	**FULL**
3.4.4(b)	Prepare a report on any additional water quality improvements	**Desktop**	**NR**	**No Corresponding Clause**			
3.5	**Drinking Water - Incident Management**			**6.6**			
3.5.1	Immediately report to NSW Health any information or event which may have risk for public health.	**Desktop**	**FULL**	**No Corresponding Clause**			
3.5.2	Maintain Incident Management Plan	**Desktop**	**FULL**	6.5.6	**FULL**	**FULL**	**FULL**
3.5.3	Incident plan must contain procedures and protocols for managing incidents	**Desktop**	**FULL**	6.5.7	**FULL**	**FULL**	**FULL**
3.5.4	When preparing the incident plan, have regard to the concept of good practice set out in the 2006 Guidelines	**Desktop**	**FULL**	**No Corresponding Clause**			
3.6	**Other Grades of Water**			**6.7**			
3.6.1	Supply other grades of water according to relevant guidelines	**FULL**	**FULL**	6.7.1	**FULL**	**FULL**	**INSUF**
3.6.2	Other grades supplied does not include drinking water but does include re-use water	**NR**	**NR**	**No Corresponding Clause**			
3.6.3	Minister to resolve any conflict	**NR**	**NR**	6.7.3	**NR**	**NR**	**NR**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
4	**INFRASTRUCTURE PERFORMANCE**			**7**			
4.4	**Compliance with Performance Standards**			**7.1**			
4.4	Comply with water pressure standard (4.1.1), the water continuity standard (4.2.1) and sewerage overflow standard (4.3.1)	**FULL**	**FULL**	7.1.1	**FULL**	**FULL**	**FULL**
4.5	**Reporting on system performance standards**			**7.5**			
4.5.1	By 1 September each year, must provide report to IPART on compliance with water pressure, water continuity and sewerage overflow standards	**Desktop**	**FULL**	7.5.1	**Not previously reported**		
4.5.2	By 1 September each year, must provide report to IPART on the number of properties that financial year that experienced water pressure failure, interruptions or uncontrolled sewerage overflow.	**Desktop**	**FULL**	7.5.1	**Not previously reported**		
4.5.3	Must maintain record systems sufficient to enable performance measurements against standards	**Desktop**	**FULL**	**No Corresponding Clause**			
4.5.4	Must provide IPART with electronic access to records.	**Desktop**	**FULL**	7.5.2	**Not previously reported**		
4.6	**Review of system performance standards**			**7.3**			
4.6.1	IPART and Sydney Water to report to minister on whether amendments should be made to the standards	**Desktop**	**NR**	7.3.1	**Not previously reported**		
4.6.2	The report under clause 4.6.1 must include analysis of benefits and costs of any amendments	**Desktop**	**NR**	7.3.2	**Not previously reported**		
4.6.3	Minister may publish the amendments in the NSW Government Gazette	**Desktop**	**NR**	7.3.3	**Not previously reported**		
4.6.4	Any amendments to performance standards to be incorporated into customer contract.	**Desktop**	**NR**	7.3.4	**Not previously reported**		
4.7	**Service quality and system performance indicators**			**7.4**			
4.7.1	Must maintain record systems to sufficiently enable measurement against performance indicators in schedule 1.	**Desktop**	**FULL**	7.4.4	**Not previously reported**		
4.7.2	Where there is inconsistency, the decision of IPART will prevail	**Desktop**	**NR**	**No Corresponding Clause**			
4.7.3	By 1 September each year must report to IPART performance against service quality and system performance standards	**Desktop**	**FULL**	7.5.1	**Not previously reported**		

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
4.7.4	Must provide IPART with electronic access to records.	**Desktop**	**FULL**	7.5.2	**Not previously reported**		
4.8	**Asset Management Obligation**						
4.8(a)	Must ensure assets are managed consistent with terms and conditions of licence, obligations under customer contract and applicable laws	**Desktop**	**NR**	**No Corresponding Clause**			
4.8 (b)	Must ensure assets are managed consistent with the lowest life cycle cost and acceptable risk	**Desktop**	**NR**	**No Corresponding Clause**			
4.8 (c)	Must ensure assets are managed consistent with the whole life of the assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.8 (d)	Must ensure assets are managed consistent with its assessment of the risk of loss of the assets, and capacity to respond to potential failure or reduced performance.	**Desktop**	**NR**	**No Corresponding Clause**			
4.9	**Reporting on Asset Management System**						
4.9.1	At least once report to IPART on the state of each group of assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(a)	Report must include description of the processes, practices and plans used to manage assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(b)	Report must include description of each asset group	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(c)	Report must include assessment of expected capacity of the assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(d)	Report must include assessment of major issues or constraints on current/future performance of the assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(e)	Report must include strategies and expected costs of future investment in assets	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(f)	Report must include progress in implementing the management of assets and any recommended improvements	**Desktop**	**NR**	**No Corresponding Clause**			
4.9.2(g)	Report must include such other matters reasonably required by IPART	**Desktop**	**NR**	**No Corresponding Clause**			
4.10	**Auditing the Asset Management System**						
4.10.1	At least once IPART may conduct an audit of compliance with clauses 4.8 and 4.9	**NR**	**NR**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
4.10.2	IPART may audit compliance for the purpose of investigating, reviewing or reporting on the pricing of services under the IPART Act	**NR**	**NR**	**No Corresponding Clause**			
4.10.3	An audit undertaken under clause 4.10.1 or 1.10.2 must comply with the scope and audit specifications determined by IPART	**NR**	**NR**	**No Corresponding Clause**			
4.10.4	The provisions of clause 12 apply to audit under 4.10	**NR**	**NR**	**No Corresponding Clause**			
4.10.5	The Minister must be advised of any such decision to audit and provided with a report on it's outcomes	**NR**	**NR**	**No Corresponding Clause**			
4.11	**Water Leakage**						
4.11.1	Must ensure that by 30 June 2009, water leakage does not exceed 105 mega litres a day	**NR**	**NR**	**No Corresponding Clause**			
4.11.2	Must calculate level of water leakage using IPART approved methodologies and assumptions	**FULL**	**FULL**	**No Corresponding Clause**			
4.11.3 (a)	By 1 September each year report to IPART on economic level of water leakage and how level is calculated	**NR**	**FULL**	**No Corresponding Clause**			
4.11.3 (b)	By 1 September each year report to IPART on progress towards compliance with clause 4.11.1	**NR**	**FULL**	**No Corresponding Clause**			
4.12	**Reports related to water leakage**						
4.12.1	By 1 September each year report to IPART on bulk water meters in the drinking water system	**FULL**	**FULL**	**No Corresponding Clause**			
4.12.2	By 1 September each year report to IPART on water pressure control zones in the drinking water system	**NR**	**FULL**	**No Corresponding Clause**			
4.12.3	By 1 September each year report to IPART on bursts, breaks or leaks which occurred and time taken to repair	**NR**	**FULL**	**No Corresponding Clause**			
4.12.4	By 1 September each year report to IPART on reticulation mains and reservoir zones	**NR**	**FULL**	**No Corresponding Clause**			
4.13	**Response time for Water mains breaks**						
4.13.1	Response times to water main breaks and leaks	**FULL**	**MOD**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
4.13.2	Categorisation of Priorities 4,5,6 is to be finalised by IPART and published on Sydney Water Website	**NR**	**NR**	**No Corresponding Clause**			
4.13.3	By 1 September each year report to Minister and IPART on number of breaks and leaks and performance against targets in clause 4.13.1	**FULL**	**FULL**	**No Corresponding Clause**			
4.13.4	Annually submit to IPART list of all instances of non-compliance with target and reasons for non-compliance	**FULL**	**FULL**	**No Corresponding Clause**			
4.14	**Priority Sewerage**						
4.14.1	Meet requirement of 'Priority Sewerage Program':						
4.14.1 (a)	By June 2009 connect to all available lots eligible for connection under Stage One	**Desktop**	**NR**	**No Corresponding Clause**			
4.14.1 (b)	By June 2009 report to the Minister on service to Menangle/Menangle Park	**Desktop**	**FULL**	**No Corresponding Clause**			
4.14.1 (c)	By June 2009 commence work to permit connection to 30% of lots eligible for connection under Stage Two	**Desktop**	**NR**	**No Corresponding Clause**			
4.14.2	Advise Minister of delays in meeting Targets	**Desktop**	**NR**	**No Corresponding Clause**			
4.14.3	By 1 September each year report to IPART on progress towards compliance with clause 4.14.1	**Desktop**	**FULL**	**No Corresponding Clause**			
4.14.4	Stage 1 Priority Sewerage Program explanation	**Desktop**	**NR**	**No Corresponding Clause**			
5	**CUSTOMER AND CONSUMER RIGHTS**			**5**			
5.1	**Customer contract**			**5.1**			
5.1.1	The Customer Contract may only be varied in accordance with the Act	**Desktop**	**NR**	5.1.1	**NR**	**NR**	**NR**
5.1.2	The Customer Contract automatically applies to persons specified in the Act	**Desktop**	**FULL**	5.1.2	**FULL**	**FULL**	**FULL**
5.1.3	The Customer Contract is to set out the rights and obligations of customers and Sydney Water	**Desktop**	**FULL**	5.1.3	**FULL**	**FULL**	**FULL**
5.1.4	A copy of the Customer Contract, and any variations to it must be posted on Sydney Water's website	**Desktop**	**FULL**	5.1.4	**FULL**	**FULL**	**FULL**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
5.1.5	Sydney Water must initiate an independent review of the Customer Contract	**Desktop**	**NR**	5.1.5	**NR**	**NR**	**NR**
5.1.6	By the completion of the review, IPART must produce a report setting out its finding and recommendations and provide copy to the minister.	**Desktop**	**NR**	5.1.6	**NR**	**NR**	**NR**
5.1.7	Within three months of the ministers adoption of the review report, Sydney Water must issue an amended Customer Contract	**Desktop**	**NR**	5.1.7	**NR**	**NR**	**NR**
5.1.8	Sydney Water must prepare a pamphlet	**Desktop**	**HIGH**	5.1.8	**NR**	**NR**	**NR**
5.1.8(a)	Provides a brief explanatory introduction to the Customer Contract;	**Desktop**	**FULL**				
5.1.8(b)	Summarises the key rights and obligations of Customers, under the Customer Contract	**Desktop**	**FULL**				
5.1.8(c)	Refers to the types of account relief available for Customers experiencing financial hardship	**Desktop**	**FULL**				
5.1.8(d)	Contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operations.	**Desktop**	**HIGH**				
5.1.9	The pamphlet must be updated and disseminated free of charge			5.1.9	**FULL**	**FULL**	**NR**
5.1.9(a)	Customers, at least once annually with their quarterly or other bills	**Desktop**	**FULL**		**FULL**	**FULL**	
5.1.9(b)	Any other person on request	**Desktop**	**FULL**				
5.1.10	Sydney Water may enter into other contracts or arrangements for the supply of services	**Desktop**	**FULL**	5.1.10	**FULL**	**FULL**	**FULL**
5.2	**Consumers**			**5.2**			
5.2	Must fulfil obligations under customer contracts relating to compliant handling and resolution procedures	**Desktop**	**FULL**	5.2.1	**Not previously reported**		
5.3	**Code of Practice and Procedure on Debt and Disconnection**			**5.3**			
5.3.1	Develop a code of practice and procedure on debt and disconnection	**Desktop**	**FULL**	5.3.1	**NR**	**NR**	**NR**
5.3.2(a)	Provide for deferred payment or payment by instalment options for consumption bills	**Desktop**	**FULL**	5.3.2(a)	**FULL**	**FULL**	**FULL**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
5.3.2(b)	Provide for the payment options referred to in (a) to be advised in consumption bills	**Desktop**	**FULL**	5.3.2(b)	**FULL**	**FULL**	**FULL**
5.3.3	Include the code of practice and procedure on debt and disconnection in its Customer Contract	**Desktop**	**FULL**	5.3.3	**FULL**	**FULL**	**FULL**
5.3.4(a)	Disseminate information to Customers at least once annually with their quarterly or other bills	**Desktop**	**FULL**	5.3.4(b)	**FULL**	**FULL**	**FULL**
5.3.4(b)	Disseminate information to any other person on request	**Desktop**	**FULL**	5.3.4(c)	**FULL**	**FULL**	**FULL**
5.4	**Customer Councils**			**FULL**			
5.4.1	Establish and regularly consult with one or more Customer Councils	**Desktop**	**FULL**	5.4.1	**FULL**	**FULL**	**FULL**
5.4.2	A Customer Council may be utilised by Sydney Water to provide high quality advice	**Desktop**	**FULL**	5.4.2	**FULL**	**HIGH**	**FULL**
5.4.3	Members must be appointed consistent with the licence	**Desktop**	**HIGH**	5.4.4	**MOD**	**FULL**	**NR**
5.4.4	Membership must include the specified groups	**Desktop**	**HIGH**	5.4.5	**MOD**	**FULL**	**FULL**
5.4.5	Sydney Water may require members to serve on multiple Councils	**Desktop**	**NR**	5.4.6	**NR**	**NR**	**NR**
5.4.6(a)	Council must comprise members of any customer council prior to the Commencement Date	**Desktop**	**FULL**	**No Corresponding Clause**			
5.4.6(b)	Council must comprise any other person appointed by Sydney Water, consistent with clause 5.4.4	**Desktop**	**NR**	**No Corresponding Clause**			
5.4.7	Term of members is two years	**Desktop**	**NR**	5.4.7	**NR**	**NR**	**FULL**
5.4.8	Half the members of a Council must be new members	**Desktop**	**NR**	5.4.8	**NR**	**NR**	**NR**
5.4.9	No person may have more than two consecutive terms	**Desktop**	**NR**	5.4.9	**NR**	**NR**	**NR**
5.4.10	Appointments for the remaining term of the Council is possible if a position becomes vacant	**Desktop**	**FULL**	5.4.10	**NR**	**NR**	**NR**
5.4.11	If members of a Council are not individuals 5.4.8. and 5.4.9 do not apply	**Desktop**	**NR**	5.4.11	**FULL**	**NR**	**NR**
5.4.12	Existing members will be eligible to be appointed for one term and other members for 2 consecutive terms	**Desktop**	**NR**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
5.4.13	Development of a Customer Council Charter addressing the specified issues within 3 months	**Desktop**	**NR**	5.4.12	**FULL**	**FULL**	**NR**
5.4.13 (a)	The role of the customer council.	**Desktop**	**FULL**	5.4.12 (a)	**Not previously reported**		
5.4.13 (b)	Selection criteria on how members will be drawn from the community.	**Desktop**	**FULL**	5.4.12 (b)	**Not previously reported**		
5.4.13 (c)	Information on how the customer council will operate.	**Desktop**	**FULL**	5.4.12 (c)	**Not previously reported**		
5.4.13 (d)	Induction processes for new members.	**Desktop**	**HIGH**	**No Corresponding Clause**			
5.4.13 (e)	A description of the type of matters that will be referred to the customer council.	**Desktop**	**FULL**	5.4.12 (d)	**Not previously reported**		
5.4.13 (f)	Procedures for the conduct of customer council meetings	**Desktop**	**FULL**	5.4.12 (e)	**Not previously reported**		
5.4.13 (g)	Communicating the outcome of the customer council's work to Sydney Water.	**Desktop**	**FULL**	5.4.12 (f)	**Not previously reported**		
5.4.13 (h)	Procedures for tracking issues raised and ensuring appropriate follow-up of those issues.	**Desktop**	**FULL**	5.4.12 (g)	**Not previously reported**		
5.4.13 (i)	Funding and resourcing of the customer council by Sydney Water including sitting fees and expenses for members.	**Desktop**	**FULL**	5.4.12 (h)	**Not previously reported**		
5.4.14	There must be a charter for each customer council. A single Customer Council Charter may be applied to other Councils	**Desktop**	**FULL**	5.4.14	**FULL**	**FULL**	**FULL**
5.4.15	Provide the necessary information to enable the Council to discharge its tasks	**Desktop**	**HIGH**	5.4.15	**HIGH**	**HIGH**	**FULL**
5.4.16	Report annually on the issues considered by, and achievements, of each customer council. A Copy must be provided on the website for downloading free of charge and made available for collection free of charge.	**Desktop**	**HIGH**	5.4.16	**FULL**	**FULL**	**FULL**
5.5	**Customer Service Indicators**						
5.5.1	Must maintain record systems to sufficiently enable measurement against indicators in schedule 2.	**Desktop**	**HIGH**	**No Corresponding Clause**			
5.5.2	Report to IPART performance against indicators in schedule 2 by 1 September each year	**Desktop**	**FULL**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
5.5.3	Report must include analysis of problems of a systematic nature	**Desktop**	**FULL**	**No Corresponding Clause**			
5.5.4	Sufficient compliance if report is integrated into report required under clause 4.7.3	**Desktop**	**FULL**	**No Corresponding Clause**			
6	**COMPLAINTS AND DISPUTE HANDLING**			**12**			
6.1	**Internal Dispute Resolution Process**			**12.1**			
6.1.1	Establish and Maintain Internal complaint handling procedures	**Desktop**	**FULL**	12.1.1	**FULL**	**FULL**	**FULL**
6.1.2	Must be based on Australian Standard AS4269-1995	**Desktop**	**HIGH**	12.1.2	**HIGH**	**HIGH**	**HIGH**
6.1.3	Must make available information concerning Internal complaint handling procedures	**Desktop**	**FULL**	12.1.3	**FULL**	**FULL**	**FULL**
6.1.4	Must provide information in clause 6.1.3 to customers through their bills at least once annually	**Desktop**	**FULL**	12.1.4	**FULL**	**FULL**	**FULL**
6.2	**External Dispute Resolution Scheme**			**12.2**			
6.2.1	Must establish or be a member of an industry based dispute resolution scheme	**Desktop**	**FULL**	12.2.1	**NR**	**NR**	**NR**
6.2.2	Dispute scheme established by Sydney Water is subject to Ministers Approval	**Desktop**	**NR**	12.2.2	**NR**	**NR**	**NR**
6.2.3	Prepare a pamphlet to explain scheme and how it operates	**Desktop**	**FULL**	12.2.6	**FULL**	**FULL**	**FULL**
6.2.4	Must provide information to customers through their bills at least once annually	**Desktop**	**FULL**	12.2.7	**FULL**	**FULL**	**FULL**
6.2.5	Provide IPART with written reports of the determinations made by the body	**Desktop**	**NR**	12.2.8	**NR**	**NR**	**NR**
6.2.6	Must report each year to IPART on the number and type of complaints received, including the following information:	**Desktop**	**FULL**	12.2.9	**FULL**	**FULL**	**FULL**
6.2.6(a)	The number and types of complaints received by the dispute resolution body, classified in accordance with the dispute resolution body's reporting arrangements.	**Desktop**	**FULL**				
6.2.6(a)	Any other relevant information required by IPART to be included in the report.	**Desktop**	**NR**				
6.2.7	The report in clause 6.2.6 must be made available to the public free of charge	**Desktop**	**FULL**	12.2.10	**FULL**	**FULL**	**FULL**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
6.3	**Complaints to other bodies**			**12.3**			
6.3.1	By 1 September each year report to IPART on all complaints made that were referred for resolution by an external body	**Desktop**	**FULL**	12.3	**NR**	**INSUF**	**INSUF**
6.3.2	By 1 September each year report to IPART on all civil actions brought in all courts where person sought damages or other relief	**Desktop**	**HIGH**	12.3	**NR**	**INSUF**	**INSUF**
6.3.3	The reports required under clauses 6.3.1 and 6.3.2 must contain the following information:			12.3			
6.3.3(a)	The number and types of matters.	**Desktop**	**HIGH**	12.3(a)	**NR**	**INSUF**	**INSUF**
6.3.3(b)	The outcome of the matters.	**Desktop**	**FULL**	12.3(b)	**NR**	**INSUF**	**INSUF**
6.3.3(c)	If the matters were subject to a negotiated settlement, how they were settled.	**Desktop**	**NR**	12.3(c)	**NR**	**INSUF**	**INSUF**
6.3.3(d)	Any problems of a systemic nature arising from the matters or which the matters uncovered.	**Desktop**	**NR**	12.3(d)	**NR**	**INSUF**	**INSUF**
6.3.3(e)	Any other information that IPART may reasonably request.	**Desktop**	**NR**	12.3(e)	**NR**	**INSUF**	**INSUF**
7	**Environment – Indicators and Management**			**9**			
7.1	**Environmental Indicators**			**9.1**			
7.1.1	Monitor, compile data and report on environmental performance indicators	**Desktop**	**FULL**	9.1.1	**FULL**	**HIGH**	**HIGH**
7.1.2	By 1 September each year report on performance against the indicators	**Desktop**	**FULL**	9.1.3	**HIGH**	**HIGH**	**HIGH**
7.1.3	The Report to enable a year to year comparison	**Desktop**	**HIGH**	9.1.4	**FULL**	**HIGH**	**HIGH**
7.1.4	The Report to be made publicly available free of charge at Sydney Water offices and on the website	**Desktop**	**FULL**	9.1.5	**HIGH**	**HIGH**	**HIGH**
7.2	**Environmental Management**			**9.3**			
7.2.1	Must have in place an environmental management system certified to AS/NZS ISO 14001 to manage environmental risk	**Desktop**	**FULL**	**No Corresponding Clause**			
7.2.2	By 1 September produce a 5-year Environment Plan	**Desktop**	**FULL**	9.3.1	**NR**	**NR**	**NR**
7.2.3	Must engage in public consultation in developing the Environment Plan	**Desktop**	**FULL**	9.3.2	**NR**	**NR**	**NR**

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
7.2.4(a)	The Plan must contain details of the environmental improvement program	**Desktop**	**FULL**	9.3.3(a)	**NR**	**NR**	**NR**
7.2.4(b)	The Plan must endorse ESD principles	**Desktop**	**FULL**	9.3.3(b)	**NR**	**NR**	**NR**
7.2.4(c)	The Plan must be integrated into business plans	**Desktop**	**FULL**	9.3.3(c)	**FULL**	**FULL**	**HIGH**
7.2.4(d)	The Plan must incorporate the energy management plan	**Desktop**	**HIGH**	9.4	**Not previously reported**		
7.2.4(e)	The Plan must incorporate targets & time tables for achievement over term of Plan	**Desktop**	**HIGH**	9.3.4	**NR**	**NR**	**NR**
7.2.5	The Plan must be posted on the website and made available for collection free of charge	**Desktop**	**FULL**	9.3.5	**NR**	**NR**	**NR**
7.2.6	Compile report, detailing progress in meeting Plan and complying with targets and timetables. The report must be posted on the website and made available for collection free of charge	**Desktop**	**HIGH**	9.3.6	**FULL**	**FULL**	**FULL**
7.2.7	Review the Plan consulting with DEC, DIPNR, IPART and peak environmental groups.	**Desktop**	**FULL**	**No Corresponding Clause**			
7.3	**Potable Water Use**						
7.3.1	Ensure that potable water use for treatment processes has been reduced by 80% by 30 June 2009	**Desktop**	**NR**	**No Corresponding Clause**			
7.3.2	By 30 June 2009 ensure that specific sewerage treatment plants use at least 85% recycled water for treatment processes	**Desktop**	**NR**	**No Corresponding Clause**			
7.3.3	Must undertake potable water efficiency audits at specific sewerage treatment plants	**Desktop**	**NR**	**No Corresponding Clause**			
7.3.4	By 1 September each year, report to IPART on progress in relation to clause 7.3.1, 7.3.2, 7.3.3	**Desktop**	**FULL**	**No Corresponding Clause**			
7.4	**Metering of Individual Units**						
7.4.1(a)	Within 9 months of commencement, must conduct at least one trial to determine costs and benefits to providing individual meters	**FULL**	**FULL**	**No Corresponding Clause**			
7.4.1(b)	Within 9 months of commencement, evaluate outcomes of the trial and provide a report to the minister outlining the outcomes	**FULL**	**NR**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
9.1	**Water Conservation Target**			**8.1**			
9.1.1	Take action to reduce water quantity (other than re-use water) from all sources to 329L/day/capita by 2010/2011	**Desktop**	**FULL**	8.1.1(a) 8.1.1(b)	**LOW** **MOD**	**Partial**	**Partial**
9.1.2	In assessing compliance make reasonable adjustments for the effects of weather	**Desktop**	**FULL**	**No Corresponding Clause**			
9.1.3	Report to IPART by 1 September every year progress towards clause 9.1.1 target	**Desktop**	**FULL**	**No Corresponding Clause**			
9.2	**Demand Management Strategy**			**8.2**			
9.2.1	Consider demand side management for planning future services including addressing water leakage	**FULL**	**FULL**	8.2.2	**HIGH**	**FULL**	**FULL**
9.2.2	Provide Demand Management Strategy Implementation Report by 1 September each year	**FULL**	**FULL**	8.2.3	**FULL**	**FULL**	**FULL**
9.2.3(a)	The Report must estimate past, current and projected water uses and distinguish users	**FULL**	**FULL**	8.2.4(a)	**FULL**	**HIGH**	**FULL**
9.2.3(b)	The Report must describe supply deficiencies	**FULL**	**FULL**	8.2.4(b)	**MOD**	**Partial**	**HIGH**
9.2.3(c)	The Report must identify conservation measures	**FULL**	**FULL**	8.2.4(c)	**FULL**	**FULL**	**FULL**
9.2.3 (d)	The Report must describe, cost and evaluate additional conservation measures	**FULL**	**FULL**	8.2.4(d)	**INSUF**	**HIGH**	**HIGH**
9.2.3 (e)	The Report must describe future plans for water reclamation & strategies to alter water use practices	**FULL**	**FULL**	8.2.4(e)	**HIGH**	**HIGH**	**FULL**
9.2.3 (f)	The Report must evaluate cost of plans and alternatives	**FULL**	**NR**	8.2.4(f)	**MOD**	**Partial**	**Partial**
9.2.3 (g)	The Report must prioritise and schedule the implementation of courses of action	**FULL**	**FULL**	8.2.4(g)	**INSUF**	**HIGH**	**HIGH**
9.2.3(h)	The Report must identify strategies for reducing water leakage	**FULL**	**FULL**	8.2.4(h)	**HIGH**	**FULL**	**HIGH**
9.2.3(i)	The Report must include components of a water balance table	**FULL**	**FULL**	**No Corresponding Clause**			
9.2.3(j)	The Report must include consumption of water across all sectors	**FULL**	**FULL**	**No Corresponding Clause**			

2006-10 Operating Licence				*2000/05 Operating Licence*			
Licence Clause	**Summary of Requirement**	**06/07**	**05/06**	**Former Clause**	**04/05**	**03/04**	**02/03**
9.2.3(k)	The Report must for each demand management include planned and actual water savings and planned and actual expenditure and actual measures for performance indicators.	**FULL**	**FULL**	**No Corresponding Clause**			
9.2.4	Engage third party to verify mathematical models for future water demand	**NR**	**FULL**	8.2.5	**FULL**	**FULL**	**FULL**
9.3	**Reducing Discharges**			**8.3**			
9.3.1	Sydney Water must meet the Re-use water targets set by the Minister or Sydney Water from time to time.	**Desktop**	**NR**	**No Corresponding Clause**			
9.3.2	Take action to generate Re-use water from the sewage or effluent	**Desktop**	**FULL**	8.3.1	**MOD**	**Partial**	**HIGH**
9.3.3	By 1 September each year, report to IPART on progress in meeting the Re-use water target required under clause 9.3.1	**Desktop**	**NR**	8.3.2	**Not previously reported**		
9.4	**Water Conservation Rating and Labelling**			**8.4**			
9.4.1	Encourage manufacturers to improve water use efficiency of appliances	**Desktop**	**FULL**	8.4.1	**FULL**	**FULL**	**FULL**
9.4.2	By 1 September each year, report to IPART on its performance under clause 9.4.1	**Desktop**	**FULL**	8.4.2	**Not previously reported**		
9.5	**Review of Part 9 of Licence**						
	During this Licence IPART may review Part 9 of the Licence if the Minister directs it to do so.	**NR**	**NR**	**No Corresponding Clause**			
12.2	**What the Audit Report is on**						
12.2.1(b)	Sydney Water's Implementation of any Memorandum of Understanding	**Desktop**	**MOD**	**No Corresponding Clause**			

Table A-2 provides a summary of compliance levels reached by Sydney Water in the 2006/07 Audit period for the Ministerial requirements. Ministerial requirements are usually specific to each operating year and hence yearly comparisons with previous operational audits are not applicable for a number of requirements.

Table A- 2 Ministerial Requirements - Summary of Compliance

Directive No.	Summary of Requirement	2006/07
	Summary of Ministerial requirements arising from 2005/06 Operational Audit	
MR 1	**Implement revised flowmeter installation program** Sydney Water to achieve the revised flowmeter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006 which entails: (a) 40 flowmeters before 30 June 2007 (b) 28 flowmeters before 30 September 2008	**FULL**
MR 2	**Clarification of Leakage Response Times** *"The revised Sydney Water Operating Licence includes a requirement that Sydney Water achieves certain response times to water main breaks and leaks. Response times have been established according to a set of priorities reflecting the severity of the water loss situations. In cases where the priority of a water loss situation is upgraded as a result of experienced "on-site" analysis, I concur with the Tribunal's suggestion that the response time relevant to the amended priority should commence when this amended priority is established. I would be grateful if Sydney Water could reach agreement with the Tribunal to incorporate this clarification into the Monitoring and Reporting Protocol."*	**FULL**
	Outstanding Ministerial requirements arising from 2004/05 Operational Audit	
MR 4.1	**Creation of 14 water pressure zones by June 2007**	**HIGH**

Appendix B

Audit Brief

Request for Tender

RFT No W03/2007 – W05/2007

Operational Audit of Sydney Water Corporation

RFT W03/2007

Operational Audit of Hunter Water Corporation

RFT W04/2007

Operational Audit of the Sydney Catchment Authority

RFT W05/2007

IMPORTANT NOTE

This Request for Tender refers to three Operational Audits, namely audits of Sydney Water Corporation, Hunter Water Corporation, and the Sydney Catchment Authority.

Tenderers may wish to be considered for one or more of these audit projects.

Tenderers who wish to be considered for more than one audit need to submit a separate tender for each audit, noting the reference numbers: W03/2007, W04/2007, W05/2007.

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1. Introduction

The Independent Pricing and Regulatory Tribunal (the "Tribunal") is a body corporate established under the Independent Pricing and Regulatory Tribunal Act 1992 (NSW) and its role is described on the Tribunal's web site at http://www.ipart.nsw.gov.au/.

This document, including the Schedules, is a Request for Tender ("RFT") and is an invitation to suitably qualified persons or organisations to tender to provide the Services in Schedule 1.

Anyone who receives a copy of this RFT is referred to in this RFT as a tenderer whether or not they submit a tender in response to this RFT.

The conditions of Tender are set out in this RFT.

Tenderers must complete Schedule 2 and address the requirements of Schedule 3 in submitting their Tender.

Tenders must be lodged with the Tribunal by no later than the closing date set out in Item 2 of Schedule 1("Closing Date").

The criteria used by the Tribunal to evaluate tenders are set out in Schedule 3.

2. Application of these Conditions of Tender

Tenderers must make themselves familiar with all of the conditions of this RFT at the Closing Date and are deemed to have tendered on the basis of any changes which may be made to the RFT up to the Closing Date.

Tenderers will be deemed to have accepted all of the conditions of tender in this Request for Tender and must ensure that they comply with them in all respects.

3. Communications with Tenderers

Tenderers may be invited to attend a briefing by the Tribunal on this RFT.

The Tribunal will only provide notices and address correspondence under this RFT to tenderers at the addresses notified in writing to the Tribunal.

The Tribunal will not be responsible for any correspondence or notices not received by any tenderer.

4. Format of Tender

Each tender must be in writing and must comply with the requirements of this RFT.

5. Lodgement and Opening of Tenders

Tenderers must submit three hardcopies and one electronic "soft" copy (in a format compatible with Microsoft Word XP Professional) of its tender. One set of the hardcopy documents must be marked "ORIGINAL" and the other copies must be marked "COPY". The electronic "soft" copy should be sent by email to the General Manager, Support Services at the following email address: meryl_mccracken@ipart.nsw.gov.au. If any inconsistency arises between the copies, including the electronic "soft" copy, the hardcopy tender marked "ORIGINAL" will prevail.

The tenders in hardcopy must be submitted in a sealed envelope marked with the RFT reference number so that it is received by the Closing Date.

All documentation must be in the English language and, if relevant, refer to Australian dollars.

All information must be printed without alterations or erasures (unless each amendment is signed in ink).

Tenders must be addressed to:

"Operating License Audits 2006-07"
General Manager, Support Services
Independent Pricing and Regulatory Tribunal

and delivered to the following address by no later than the Closing Date:

At P O Box Q290
QVB Post Office
NSW 1230

Or The Tender Box, Level 2
44 Market Street
SYDNEY NSW 2000

Tenders will be secured in the Tender Box at the Tribunal on Level 2 of 44 Market Street, Sydney until after the Closing Date.

The opening of tenders is not a public process and neither tenderers nor their representatives are entitled to attend the opening of tenders.

All tenders must be provided free of charge to the Tribunal.

Tenders <u>must not</u> be sent directly to Michael Seery nor any other member of the Water Licensing Team.

6. Non-Compliance/Late Tenders

Any tender not complying with this RFT.

Any tender received after the Closing Date will be registered as a late tender.

The Tribunal reserves the right at its absolute discretion to accept or not accept late and/or non-complying tenders.

7. Consultancy Agreement

The successful tenderer will enter into a consultancy agreement with the Tribunal, in the form set out in Schedule 6.

Any consultancy agreement arising from this RFT will be between the Tribunal and the tenderer whose tender is accepted by the Tribunal.

Each tenderer is required to identify in its tender any clauses of the Consultancy Agreement with which it does not agree. The tenderer should propose alternative clauses for consideration by the Tribunal and the rationale for the proposed amendment.

If a tenderer does not indicate disagreement in its tender with a clause of the Consultancy Agreement, that tenderer will be deemed to have agreed with that clause. The tenderer is precluded from raising any objection to, or amendment of, any clauses of the Consultancy Agreement with which the tenderer has not disagreed in its tender.

Any standard printed conditions of contract of, or provided by, the tenderer will be rejected by, and will not be binding on the Tribunal.

The Tribunal reserves the right at its absolute discretion to accept, reject or agree to modifications or amendments proposed by tenderers to the Consultancy Agreement, or any part thereof.

8. Validity and Withdrawal

All tenders will remain valid for a period of 6 calendar months from the Closing Date.

A tender must not be withdrawn without the prior written consent of the Tribunal.

9. Clarification of Tenders

The Tribunal may seek clarification or request further information from tenderers after the Closing Date, as part of the selection process.

10. The Negotiation Stage

This clause is subject to clause 22.

The Tribunal may commence negotiations at its absolute discretion with the tenderers whose tenders are acceptable to the Tribunal.

The Tribunal reserves the right to negotiate with any tenderer until a satisfactory conclusion is reached for the Tribunal.

The negotiation by the Tribunal with any tenderer will not create any rights of any kind in favour of any tenderer in relation to, or for the purposes of, any agreement with the Tribunal or at all.

11. Award of Agreement

This clause is subject to clause 22.

No rights of any kind accrue to a tenderer whose tender is acceptable to the Tribunal until the tenderer and the Tribunal execute a form of the consultancy agreement in Schedule 6.

12. Amendments to RFT

If the Tribunal considers it necessary to make a change to the RFT before the Closing Date, the amendments will be posted on the web site of the Tribunal and is deemed to be a communication of the change to the RFT to tenderers. No oral explanation or change to any part of this RFT by any officer or agent of the Tribunal will be deemed to constitute an addendum.

The Tribunal may in its absolute discretion, by notice posted on the web site of the Tribunal before the Closing Date, do all or any of the following:

a) vary or deviate from the processes as set out in this RFT;

b) terminate or vary the RFT process;

c) add to, vary or amend this RFT and the conditions in this RFT;

d) require additional information from any tenderer;

e) change the structure and timing of the RFT; and

f) amend the scope of the Services required by the Tribunal in Schedule 1.

13. Tenderers to bear own costs and risk

Participation in any stage of the RFT will be at the tenderer's sole risk, cost and expense.

The Tribunal and its advisers, employees and contractors will not be responsible for any loss, damage or claim (whether direct, indirect or consequential) to the tenderer or any person arising out of this RFT, tendering to the RFT, the RFT process, the negotiation with tenderers, or awarding or not awarding of the tender or any other associated matter. In no event will the Tribunal be responsible for any loss of profits.

This clause 13 will survive the conclusion of all processes arising from the RFT.

14. Acceptance of Tenders

While the Tribunal may have regard to the requirements set out in Schedules 2 and 3, it retains an absolute discretion as to how it will assess the tenders.

15. No obligation to accept tenders and part tenders

The Tribunal will be under no obligation to accept any tender or part tender.

The Tribunal will be under no obligation to accept the lowest priced tender.

16. Access to further information

The Tribunal may decide to provide further information concerning this RFT before the Closing Date. If the Tribunal decides to provide further information it will notify all tenderers by notice posted on the web site of the Tribunal.

17. Contact of Referees

The Tribunal reserves the right to contact the referees of each tenderer.

18. Interviews

The Tribunal reserves the right to conduct interviews of one or more tenderers after the Closing Date. If an interview is required, the Tribunal will give reasonable notice to the tenderer.

19. Confidentiality and Privacy

In this document:

"confidential information" means all information of the Tribunal, in any form or media, including, without limitation, trade secrets, know-how processes, techniques, source and object codes, software, computer records, business and marketing plans and projections, details of agreements and arrangements with third parties, customer information and lists, designs, plans, drawings and models, but does not include:

(a) information which is at the date of this RFT, or which subsequently becomes into the public domain other than as a result of disclosure by a tenderer, or a person receiving the confidential information from the tenderer, in breach of the conditions of this RFT;

(b) information which a tenderer can establish by written records is at the date of this document already known to that person; or

(c) information which a tenderer can establish to the Tribunal's satisfaction, was developed independently of the Tribunal or any agent or employee of the Tribunal.

In consideration of the Tribunal agreeing to disclose confidential information to a tenderer under or as part of this RFT, the tenderer:

(a) acknowledges and agrees that any confidential information is secret and confidential and that any confidential information disclosed by the Tribunal to the tenderer is disclosed to the tenderer only for the purpose of this RFT and in reliance on, and pursuant to, the terms of the conditions of this RFT;

(b) agrees to keep the confidential information secret and confidential at all times;

(c) must not, without the prior written approval of the Tribunal, use, disclose, divulge or deal with any confidential information, nor cause, permit or allow any act, matter or thing to be done, omitted or occur whereby any confidential information may become known or be used by, or be disclosed or communicated to, any other person, except strictly in accordance with the terms of the conditions of this RFT; and

(d) must return to the Tribunal or destroy all copies of the confidential information upon written demand by the Tribunal or upon the withdrawal of the tenderer from the RFT;

The tenderer acknowledges and agrees that the Tribunal may publish the following details of the Consultancy Agreement, if any, awarded under this RFT:

(a) details of the Consultancy Agreement (including a description of Services to be completed, the term of the Consultancy Agreement, the commencement date and anticipated completion date);

(b) the full identity of the successful tenderer;

(c) the price payable by the Tribunal and the basis for future changes in this price; and

(d) the significant evaluation criteria and the weightings used in this RFT.

If a tenderer includes information in its tender that it does not wish to be disclosed, it must identify that information in writing to the Tribunal and provide written reasons for such request prior to or on the Closing Date. Where the Tribunal does not agree with the tenderer's request the Tribunal will advise the tenderer accordingly and that decision will be binding on the tenderer.

This clause 19 will not merge with the execution of the Consultancy Agreement.

20. Intellectual property

Nothing in the RFT constitutes a transfer of intellectual property rights of the Tribunal (including intellectual property rights in the RFT) to any tenderer.

The Tribunal may, in its absolute discretion, by written notice, require that all written information provided to tenderers (and copies of the information) be returned to the Tribunal at any time.

21. Disclaimer

The Tribunal has taken reasonable care in the preparation of the RFT, however the information contained in this RFT and the information upon which it is based has not been independently verified or audited. Tenderers are encouraged to seek independent verification on any information about which they are unclear.

The statements, opinions, projections, forecast or other information contained in this RFT may change. Where any such information relates to future matters, no steps have been taken to verify that that information is based upon reasonable grounds. Actual future events may vary significantly from the forecast.

Neither this RFT nor any agreement made on the basis of this RFT, may under any circumstances be taken to create an implication that there will be no material change in the affairs of the Tribunal from the date of issue of this RFT.

The provisions of this disclaimer apply in relation to this RFT and also in relation to any other oral or written communications or disclosures to the tenderer or to any other person.

22. Other Reservations

By issuing this RFT the Tribunal is not required to negotiate or to enter into an agreement for the provision of the Services for tender with any person.

The Tribunal may elect to withdraw from the process described in the RFT and may terminate the RFT altogether.

The Tribunal has no obligation to consider and no obligation in respect of the manner, timing or basis of consideration of, any tender.

The Tribunal may at its absolute discretion, withdraw, change or suspend the RFT and its consideration of tenders and any part thereof.

Any decision to shortlist tenderers is for the convenience of the Tribunal and does not create any rights in any person. The Tribunal reserves the right at its absolute discretion to invite persons who do not respond to this RFT to participate in any subsequent tender for the Services.

The Tribunal may at its absolute discretion approve or reject any sub-contractors the tenderer may wish to appoint.

23. Tenderer's duty to inform themselves fully

Any person contemplating the submission of a tender and who is in doubt as to the true meaning of any part of the specification/requirements, requires further information or finds discrepancies in, or omissions from, the RFT may submit a written request for an explanation or correction no later than 14 days before the Closing Date. The Tribunal or its agents will respond to each written request and reserve the right to advise in similar terms all tenderers save that the source of the inquiry will not be disclosed.

In order to maintain equity in the tendering, Tenderers are advised that they should not seek information in regard to this RFT directly from staff and contractors employed by the Tribunal other than via the mechanism detailed in this clause.

Tenderers must only rely on written advice from the Tribunal.

24. Briefing for interested persons

The Tribunal may provide a formal briefing for tenderers. Tenderers attending are required to register at the briefing. The register of tenderers will be distributed to all tenderers within 2 working days after the briefing. If a tenderer has a query or requires further information that is not addressed at the briefing, the tenderer must make a request for information in writing and that request will be registered. The request and such answer as the Tribunal is able to provide will be sent to all registered persons who registered at the briefing.

Questions may be submitted in advance of the briefing to be answered at the meeting. The originator of the question will not be disclosed. Advance questions must be submitted in writing seven days prior to the briefing.

25. Supporting material

Supporting material is material additional to the tender which elaborates on or clarifies the tender but does not alter it in any material respect. Material presented as supporting material, which effectively alters the formal tender in any material respect, may not be accepted. Supporting material may be provided at the initiative of the tenderer or at the request of the Tribunal. Supporting material must be received by the Tribunal on or before the Closing Date unless specifically requested by the Tribunal subsequent to that date. The Tribunal reserves the right to disregard any unsolicited supporting material dispatched after the Closing Date. Supporting material must be

clearly labelled (identifying this RFT and its subject matter). The intention to submit supporting material in this manner must be clearly stated in the tender.

26. Improper assistance in Tender preparation

Tenders which have been compiled with improper assistance of employees of the Tribunal, ex-employees of the Tribunal, and/or contractors or ex-contractors of the Tribunal or that are found to have been compiled utilising information unlawfully obtained from the Tribunal will be excluded from further consideration.

The emphasis above is on improper assistance. It does not preclude tenderers using former Tribunal employees or former contractors of the Tribunal, provided they have not been involved in the development of the RFT. If anyone has any concern regarding the employment of former Tribunal employees or former contractors of the Tribunal they should raise their concern in writing.

27. Conflict of interest

Tenderers must warrant that to the best of their knowledge at the date of submitting the tender no conflict of interest exists by itself, by its employees or any sub-contractors or is likely to arise in relation to this RFT during the RFT selection process.

If during the course of the selection process a conflict or potential conflict of interest arises tenderers undertake to notify the Tribunal immediately in writing of that conflict or potential conflict of interest.

Tenderers must not, and must use their best endeavours to ensure that any employee, agent or sub-contractor of the tenderer does not, during the course of the selection process, engage in any activity or obtain any interest likely to conflict with or restrict the tenderer in being considered under this RFT and must immediately disclose to the Tribunal such activity or interest if it occurs.

In this clause 27 a conflict of interest includes, but is not be limited to, an employee of the tenderer being related to or having a close association with or influence over an employee of the Tribunal which may have the effect of influencing, or giving the appearance of influencing, the review of the tenders to the RFT.

28. Collusive bidding

Tenderers and their officers, employees, agents, sub-contractors and advisers must not engage in any collusive bidding, anti-competitive conduct or any other similar conduct with any other tenderer, or any other person in relation to the preparation or lodgement of tenders.

29. Use of documents and information provided

The Tribunal will have permanent and unrestricted use of all documents submitted in a tender, subject to any constraints set out in the RFT.

Despite clause 29(1), intellectual property (including confidential information) owned by the tenderer or third parties and contained in the documents will not pass to the

Tribunal. However, the Tribunal will be licensed to use or copy that intellectual property to the extent necessary to conduct an efficient selection process.

30. Freedom of Information

The Freedom of Information Act 1989 and provisions of the Independent Pricing and Regulatory Tribunal Act 1992 extend, as far as possible, to the right of the Australian community to access information in documentary form in the possession of the Tribunal, limited only by considerations of the protection of essential public interest and of the private and business affairs of persons in respect of whom information is collected and held by departments and public authorities.

Should a request for access to RFT documents be received, the Tribunal will consult with the tenderer before making any decision to grant access, subject to its obligations under the Freedom of Information Act 1989 and the Independent Pricing and Regulatory Tribunal Act 1992.

The Tribunal will not disclose, the following information about any contract awarded under this tender unless the tenderer agrees, or release is determined under the Freedom of Information Act 1989 and the Independent Pricing and Regulatory Tribunal Act 1992 or is otherwise legally required:

the tenderer's financing arrangements;

the tenderer's cost structure and profit margins; and

items of the tenderer having an intellectual property (including confidential information) characteristic but excluding ideas, concepts or know-how pertaining to the subject matter of the RFT.

The information included in an unsuccessful tender is treated as commercial-in-confidence material and will not be disclosed unless the tenderer agrees, or release is determined under the Freedom of Information Act 1989 and the Independent Pricing and Regulatory Tribunal Act 1992 or is otherwise legally required. However the Tribunal may use ideas, concepts or know-how obtained from the tenders in any manner the Tribunal deems appropriate.

31. Assignment

This RFT is personal to and not assignable or transferable by the tenderer without the prior written consent of the Tribunal, which consent may be declined at the Tribunal's absolute discretion.

32. Whole Agreement

To the extent of any inconsistency between the conditions of this RFT and: any correspondence or oral exchanges between the tenderer and the Tribunal; or any Schedule, appendix or annexure to this RFT, the conditions of this RFT will prevail.

33. Relationship

The relationship between the Tribunal and tenderers is that of independent contractors and no partnership, employment, agency or joint venture may be implied into the relationship.

34. Warranty to the Tribunal

Tenderers who submit a tender to this RFT are deemed to have warranted to the Tribunal that statements, representations and claims made in the tender are true and correct and are not misleading or deceptive or likely to mislead or deceive.

35. Assistance to the Tribunal in regard to enquiries and due diligence

By submitting a tender, tenderers acknowledge that the Tribunal may make enquiries of any person to assist in establishing the suitability of the tenderer and to undertake a due diligence review. Tenderers must provide all reasonable assistance to the Tribunal to undertake these tasks.

36. Electronic document

The Tribunal may provide an electronic copy of documents and material. While the Tribunal will use its reasonable endeavours to ensure that the electronic copy is "virus free", the Tribunal does not expressly or by implication warrant that the electronic copy will not contain viruses. Tenderers who choose to receive the electronic copy supplied do so entirely at their own risk.

Schedule 1 Services Required

1. Services

This Request for Tender refers to three Operational Audits, namely audits of Sydney Water Corporation, Hunter Water Corporation, and the Sydney Catchment Authority. The audits of Sydney Water and the Sydney Catchment Authority will be undertaken using a risk-based approach (discussed below). The audits of Sydney Water and Hunter Water will include an audit of indicators for the National Water Initiative (NWI) benchmarking program.

Tenderers may wish to be considered for one or more of these audit projects. Tenderers who wish to be considered for more than one audit need to submit a separate tender for each audit.

Objectives of Consultancy

The objective of each of these audits is to assess the utility's performance against the relevant Operating Licence for the period from 1 July 2006 to 30 June 2007. For Sydney Water and Hunter Water the audit will also assess performance against NWI benchmark indicators.

Risk-Based Audits

The Operating Licences for Sydney Water and the Sydney Catchment Authority now provide that audits may be undertaken using a risk-based approach. The Tribunal has decided to undertake the risk-based audits for the 2006/07 audit. Details of the clauses subject to audit are set out for each utility in Schedule 4 and Schedule 5 of this Request for Tender.

Detailed Scope of Work

Operational Audits

In undertaking the operational audits, the auditor must:

a) conduct a detailed examination of those utility activities that are regulated by the Operating Licence, subject to the Tribunal's risk-based audit approach, where applicable;

b) assess the level of compliance achieved by the utility against each of the requirements of the Operating Licence set out in the Tribunal's risk-based audit procedure, providing detailed supporting evidence for this assessment and reporting compliance according to the Tribunal's established compliance scoring methodology, set out in Schedule 6;

c) assess and report on progress by the utility in addressing any comments made by the relevant portfolio Minister pertaining to previous audits, providing supporting evidence for these assessments. This correspondence will be provided to the successful tenderer;

d) for each section of the Operating Licence that is to be audited, identify factors (if any) that have affected the utility's performance for the period from 1 July 2006 to 30 June 2007. This includes verifying the calculation of performance indicators associated with relevant requirements of the operating licences and undertaking an assessment of any underlying trends in performance arising from these indicators. Make recommendations to the Tribunal on how the utility can improve its performance in the future, based on the audit assessment;

e) provide a formal briefing to the Tribunal or the Tribunal's Secretariat comprising an overview of the utility's overall performance against the requirements of the Operating Licence and the key findings of this assignment; and

f) prepare a full report on the findings of the assignment, including a summary of the utility's overall performance against the audited obligations of the Operating Licence and detail of its compliance with each audited obligation of the Operating Licence and any requirements of the Minister in Attachment 1.

The auditor will be responsible for assessing and interpreting the audit requirements in the relevant Operating Licence and the Act and ensuring that the audit process satisfies all statutory requirements subject to the detailed audit scope - See Schedules 4 and 5 for Sydney Water and the SCA. Notwithstanding this, the audit report should reflect the emphasis of the legislation and the Operating Licence on water quality, system performance, environmental and consumer issues. Additionally, the Tribunal has identified some key issues for the 2006/2007 round of utility audits set out in the following table.

Utility	Issue
Sydney Water	• Risk based audit to be introduced. • Leakage Minimisation Program • Readiness of pumps (eg maintenance and testing) required for contingent raw water sourced from Prospect Reservoir
Hunter Water	• Drinking Water Continuity • Debt and disconnection
SCA	• Risk based audit to be introduced. • Inter-basin transfer raw water quality management • Storm Event Raw Water Quality management including Limnology Studies of Warragamba Dam and Prospect Reservoir • Conductivity fluctuation generally – environmental management

Under the Operating Licences, the water utilities are required to provide the Tribunal with a range of reports to inform the Operational Audit. This package of information will be provided to each successful tenderer.

The Tribunal will advertise these audit processes and seek submissions from the public. The auditor must take account of any public submissions received and the views of relevant regulators (Department of Environment and Climate Change, NSW Health and the Department of Water and Energy) and other stakeholders including environment, social welfare and public interest groups.

The Tribunal has determined that the Secretariat should undertake some aspects of future operational audits. The successful tenderer will be expected to provide the Secretariat with guidance in audit concepts and procedures. In this regard, tenderers should, in the first instance, allow for approximately half a day meeting by 1-2 key audit staff at Secretariat's Sydney office. The Secretariat will undertake a desk-top review of matters not subject to audit for Sydney Water Corporation and Sydney Catchment Authority as per Schedules 4 and Schedule 5 respectively, and will oversee Auditor/Licensee meetings, and may intervene in the successful tenderer's auditing areas during the course of the audit.

NWI Indicators

The Tribunal anticipates that the audit of NWI data will be done concurrently with the Operational Audits of Sydney Water and Hunter Water. The Tribunal will require that data and comments be entered into the electronic data templates and that these will be provided to the Tribunal by Friday 12 October, 2007.

In undertaking the NWI audit, for any measure not included in the Operational Audit, the auditor must ensure the consistency and comparability of audit results. This will include analysis of documented procedures, information and quality controls, and relevant data. Any changes in systems and documented procedures must be identified.

Compliance will need to be graded according to the NWI compliance scale, which will be provided to the successful tenderer. In cases of significant non-compliance, the auditor will need to assess the utility's business's plan to ensure compliance.

Outputs

The main outputs from each audit are:

1. two draft reports and a final written report addressing the objectives of the consultancy relevant to the Operating Licence and the Ministerial requirements.
2. discussions and meetings with the Tribunal and/or the Tribunal Secretariat, and
3. presentations to the Tribunal and/or Tribunal Secretariat which outline the major issues and findings relevant to the objectives.

Four bound copies and 1 loose-leaf copy, as well as electronic copies in Microsoft Word format, should be provided for the draft and final reports referred to in point 1 above. Details of the Tribunal's preferred format will be provided to the successful tenderer.

The first draft report should provide details of audit findings for each auditable requirement of the relevant Operating Licence. The second draft report should also include compliance assessment, commentary and relevant summaries.

On completion of the audit, the auditor's Operating Licence reports, working papers and advice provided to the Tribunal will become the property of the Tribunal. The final Operating Licence audit reports are provided to the relevant portfolio Minister (the Sydney Water audit report and the Sydney Catchment Authority report will be tabled in Parliament). Accordingly, the report should be clearly and logically set out and written in plain English, avoiding the use of unnecessary technical language. The Tribunal will also publicly display and make the report available for downloading on its website.

For the NWI audit, the Tribunal requires a 7 page WSAA excel data template be completed with relevant commentary.

Audit Process

The audit process for the tenderer is outlined as follows:

1. Meeting with IPART TEAM
2. Inception meeting with water utility
3. Development of audit questions
4. Interview with water utility at their offices
5. First draft report
6. Second draft report
7. Final report

Timing

The successful tenderer must be able to meet the following work schedule:

Activity	Hunter Water	SCA	Sydney Water
Advertise for Auditors	6 August	6 August	6 August
Tenders Close	24 August	24 August	24 August
Start Contract	31 August	31 August	31 August
First Draft Audit Report	28 September	28 September	28 September
NWI excel report complete	12 October	N A	12 October
Second Draft Audit Report	26 October	26 October	26 October
Discussion of Final Draft	9 November	16 November	16 November
Delegated Tribunal	14 November	21 November	21 November
Full Tribunal	22 November	29 November	29 November
Delivery of Final Report to Minister	30 November	7 December	7 December

Formal progress updates will be required from the consultant on a weekly basis. Formal review meetings will be required following the delivery of each draft audit report (early October and early November). Other progress meetings may be required. The detailed consultancy work plan should reflect these progress meetings and the audit process outlined above.

Proposal

The consultancy proposal should demonstrate an appreciation of the task and a description of the intended approach for carrying it out. It should list the personnel to be involved,

including resumes detailing relevant experience. A detailed work plan, which includes the allocation of resources to tasks, is also required.

2. Closing date for tenders

Tenders to this RFT must be lodged with the Tribunal by no later than 5:00 pm on Friday 24 August 2007 ("Closing Date").

3. Further Information

All enquires in relation to this RFT must specify the RFT Reference and must be directed in writing in hard copy format, facsimile, or e-mail to:

Name	**Michael Seery**
Telephone	(02) 9290 8421
Facsimile	(02) 9290 2061
E-mail	michael_seery@ipart.nsw.gov.au
Address	Level 2
	44 Market Street
	SYDNEY NSW 2000

A detailed response that addresses all enquiries received will be provided to all tenderers.

Intending Tenderers are to submit their tenders to the address in section 5; they must not submit their tenders directly to Michael Seery or any member of the Water Licensing Team

Appendix C

Operating Licence

Sydney WATER

Operating LICENCE

Sydney Water Corporation Operating Licence
2005-2010

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Information about this Licence

01

1.1 Objectives of this Licence

1.1.1 The objective of this Licence is to enable and require Sydney Water to lawfully provide the Services within its Area of Operations. Consistent with this objective, this Licence requires Sydney Water to:

(a) meet the objectives and other requirements imposed on it in the Act;

(b) comply with the quality and performance standards in this Licence;

(c) recognise the rights given to Customers and Consumers; and

(d) be subject to operational audits of compliance with this Licence.

1.2 Duration of Licence

1.2.1 This Licence is renewed for a term of 5 years from the Commencement Date.

1.2.2 Notwithstanding the expiry of the term, the Governor may renew this Licence in accordance with the Act.

[Note: Section 17 of the Act allows the Governor to renew the licence for a maximum of 5 years at a time.]

1.3 End of term review of Licence

1.3.1 On or about 1 January 2009 a review of this Licence must be undertaken:

(a) to determine whether this Licence is fulfilling its objectives;

(b) in relation to any matter requiring to be reviewed by this Licence; and

(c) to determine the terms of any renewal of this Licence.

1.3.2 The review is to be undertaken by IPART, unless the Minister otherwise determines.

1.3.3 The person undertaking the review is to engage in Public Consultation as part of the review.

1.3.4 The person undertaking the review must report to the Minister within 12 months of commencing the review on the following:

(a) the findings of the review;

(b) any recommendations for amendment to this Licence, including any additional terms to be included in any renewal of this Licence; and

(c) any recommendations for amendment to any law that adversely impacts on this Licence.

1.3.5 The Minister may accept or reject any recommendation made by the person undertaking the review.

1.3.6 If any recommendation made and accepted by the Minister requires an amendment to this Licence, the recommendation is of no force or effect unless this Licence is relevantly amended in accordance with section 16 of the Act.

1.3.7 Any recommendation made by the person undertaking the review that is not accepted by the Minister is of no force or effect.

1.3.8 The report prepared under clause 1.3.4 must be made available to the public by Sydney Water at the direction of the Minister. Copies are to be made available from Sydney Water's website on the internet for downloading by any person also free of charge. A reasonable number of copies are to be made available from Sydney Water's offices.

1.4 Licence amendment

1.4.1 Subject to the Act and clause 1.4.2, this Licence may be amended by the Governor by notice in the NSW Government Gazette.

[Note: Section 16 of the Act requires that, in addition to the above procedure, in order for an amendment to this Licence to take effect, written notice of the amendment must be laid before Parliament. 15 sitting days of each House of Parliament must have passed after the proposed amendments were laid before Parliament without a notice of motion being given to disallow the proposed amendment; or if such a notice has been given, it has lapsed, been withdrawn or defeated.]

1.4.2 Before notice of the Licence amendment is tabled in Parliament under section 16 of the Act, the Minister must give Sydney Water reasonable notice of the proposed amendment to enable it to comply with the amendment (if relevant) upon its commencement.

1.5 Contravention of Licence

Sydney Water acknowledges that, if the Minister is of the opinion that Sydney Water has contravened this Licence, the Minister may take action against Sydney Water under the Act.

[Note: Section 19 of the Act provides that, where the Minister is of the opinion that Sydney Water contravenes this Licence, the Minister may serve a notice on Sydney Water requiring it to rectify the contravention; or, in addition to or instead of the notice to rectify, the Governor may direct that a letter of reprimand is to be served on Sydney Water, or direct that Sydney Water is to pay a monetary penalty not exceeding $1 million.]

1.6 Cancellation of Licence

This Licence may be cancelled by the Governor in the circumstances described in the Act.

[Note: Section 20 sets out the circumstances in which this Licence may be cancelled by the Governor. These include where Sydney Water ceases without authority or permission to do any of the things referred to in section 14 of the Act; or where Sydney Water is, in the Minister's opinion, in material default in compliance with the Licence and has not rectified such default or shown cause why the Licence should not be cancelled; or where Sydney Water is convicted on more than 3 occasions within a 12 month period of criminal offences punishable by at least $10,000 fine or 12 months penal servitude or imprisonment if Sydney Water were a natural person.]

Sydney Water's responsibilities 02

2.1 Responsibility of Sydney Water under this Licence and other laws

2.1.1 Sydney Water must comply with this Licence and all applicable laws.

[Note: Sydney Water has obligations under a number of laws including:

Protection of the Environment Operations Act 1997
Public Health Act 1991
Fluoridation of Public Water Supplies Act 1957
Water Act 1912
Water Management Act 2000
Independent Pricing and Regulatory Tribunal Act 1992
State Owned Corporations Act 1989
Environmental Planning and Assessment Act 1979]

2.2 Responsibilities of Sydney Water under the Sydney Water Act

2.2.1 Sydney Water acknowledges that its principal objectives under the Act (each of which is of equal importance) are:

(a) to be a successful business and to this end operate at least as efficiently as any comparable business, maximise the net worth of the State's investment in Sydney Water, and exhibit a sense of social responsibility by having regard to the interests of the community in which it operates;

(b) to protect the environment by conducting its operations in compliance with the principles of Ecologically Sustainable Development contained in section 6(2) of the Protection of the Environment Administration Act 1991; and

(c) to protect public health by supplying safe Drinking water to its Customers and other members of the public in compliance with the requirements of this Licence.

2.2.2 Sydney Water acknowledges that in implementing its principal objectives set out in clause 2.2.1, its special objectives under the Act are:

(a) to reduce risks to human health; and

(b) to prevent the degradation of the environment.

2.2.3 The special objectives are to be interpreted by reference to the objectives referred to in section 6(1)(b) of the Protection of the Environment Administration Act 1991, so far as they are relevant to Sydney Water.

[Note: Sydney Water's objectives are set out in section 21 and section 22 of the Act. Section 6(1)(b) of the Protection of the Environment Administration Act 1991, sets out the means by which risks to human health and degradation of the environment can be reduced. These are:

- *promoting pollution prevention,*
- *adopting the principle of reducing to harmless levels the discharge into the air, water or land of substances likely to cause harm to the environment,*
- *minimising the creation of waste by the use of appropriate technology,*
- *regulating the transportation, collection, treatment, storage and disposal of waste,*
- *encouraging the reduction of the use of materials, encouraging the re-use and recycling of materials and encouraging material recovery,*
- *adopting minimum environmental standards,*
- *setting mandatory targets for environmental improvement,*
- *promoting community involvement in decisions about environmental matters,*
- *ensuring the community has access to relevant information about hazardous substances arising from, or stored, used or sold by, any industry or public authority,*
- *conducting public education and awareness programs about the environment.]*

2.3 Memoranda of Understanding

2.3.1 In accordance with the Act, Sydney Water must maintain a Memorandum of Understanding with each of the Water Administration Ministerial Corporation (WAMC), NSW Health, and DEC for the term of this Licence.

[Note: Section 35 of the Act requires Sydney Water to enter into separate Memoranda of Understanding with certain regulatory agencies, being the Water Administration Ministerial Corporation, the Director-General of NSW Health and the Department of Environment and Conservation. If Sydney Water and those regulatory agencies are not able to agree on a term of the Memorandum of Understanding, the view of the regulatory agency prevails. Section 36 deals with public exhibition of Memoranda of Understanding.]

2.3.2 The purpose of a Memorandum of Understanding is to form the basis for co-operative relationships between the parties to the memorandum. In particular:

(a) 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 Drinking water quality standards and the supply of water which is safe to drink;

(b) the Memorandum of Understanding with DEC is to recognise DEC as the environmental regulator of the State and to commit Sydney Water to environmental improvements; and

(c) 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.

2.3.3 Clause 2.3.1 does not limit the persons or regulatory agencies with whom Sydney Water may have a Memorandum of Understanding.

2.4 Monitoring and reporting protocol

2.4.1 By no later than 6 months from the Commencement Date, Sydney Water must develop and provide to IPART a protocol ("Monitoring and reporting protocol") that includes how Sydney Water will record, compile, monitor, measure and report against the service quality and system performance indicators in Schedule 1, the customer service indicators in Schedule 2 and the environmental performance indicators in Schedule 3.

2.4.2 If IPART is not satisfied the Monitoring and reporting protocol (or any part of it) complies with clause 2.4.1, IPART may require Sydney Water to amend the Monitoring and reporting protocol. If Sydney Water fails to amend the Monitoring and reporting protocol within a reasonable time after IPART requests an amendment or amendments to the Monitoring and reporting protocol, the Monitoring and reporting protocol as determined by IPART will prevail.

2.4.3 This clause 2.4 applies to any amendment to the Monitoring and reporting protocol during the duration of this Licence.

03 Water quality

3.1 Drinking Water Quality – Standards

3.1.1 Sydney Water must comply with:

(a) the Australian Drinking Water Guidelines 1996 relating to Health guideline values and the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc; and

(b) the fluoridation plant operating targets set out in the Fluoridation Code.

3.1.2 If there is an inconsistency between the Health guideline values and the Aesthetic guideline values, the Health guideline values will prevail.

3.1.3 In delivering the Services, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.

3.2 Drinking Water Quality – Monitoring

3.2.1 Sydney Water must prepare, to the satisfaction of NSW Health, a comprehensive annual Drinking water quality monitoring plan for the water supply system by 31 March each year, for the duration of this Licence and must:

(a) include system performance monitoring and regular sampling, laboratory testing and processes to ensure quality control;

(b) have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply those concepts in the manner, form and timeframes specified by NSW Health;

(c) include the monitoring of Health guideline values;

(d) include the monitoring of Aesthetic guideline values;

(e) assess the quality of water in Sydney Water's water supply system; and

(f) be undertaken for the period from the Commencement Date to 30 June 2006 and after that for each subsequent financial year.

3.2.2 The sampling frequency and the locations chosen for the monitoring should be such that the results are representative of the quality of water supplied to Consumers.

[Note: The requirement for an annual Drinking water monitoring plan is also found in the Memorandum of Understanding between NSW Health and Sydney Water, November 2000.]

3.3 Drinking Water Quality – Reporting

3.3.1 Sydney Water must produce a quarterly report that includes the water quality monitoring test results undertaken in accordance with clause 3.2. The quarterly report must be placed on its website on the internet and also made available for access by any person, free of any charges imposed by Sydney Water.

3.3.2 Sydney Water must provide to NSW Health a copy of the report compiled to comply with clause 3.3.1. If the results do not comply with the Health guideline values or the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc, Sydney Water must provide NSW Health with an appraisal of the inconsistency, and indicate action to be taken to resolve any non compliance.

[Note: The requirement for quarterly reporting of monitoring results is also found in the Memorandum of Understanding between NSW Health and Sydney Water, November 2000.]

3.3.3 Sydney Water must comply with requests by NSW Health to provide additional information on water quality. The additional information provided under this clause is to conform to the manner and form specified by NSW Health.

[Note: Under section 10H of the Public Health Act 1991 the Director General of NSW Health may require Sydney Water to produce certain information.]

3.4 Drinking Water – Planning

3.4.1 Sydney Water must prepare, to the satisfaction of NSW Health, a five-year Drinking Water Quality Management Plan (Five-Year Plan) within 5 months after the Commencement Date. Sydney Water must release to the public a discussion paper in relation to the Five-Year Plan within 2 months after the Commencement Date and must engage in Public Consultation on the discussion paper.

3.4.2 The Five-Year Plan must include strategies for the comprehensive management of the quality of Drinking water in Sydney Water's water supply system, the aim of which is to control any risk to public health and meet any Aesthetic guideline values extended to Sydney Water in or by this Licence.

[Note: The requirement for a long term water quality management strategy is also found in the Memorandum of Understanding between NSW Health and Sydney Water, November 2000.]

3.4.3 In preparing the Five-Year Plan, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.

3.4.4 Sydney Water must prepare, and make available to NSW Health by 1 October each year, an annual report on the implementation of the Five Year Plan. The report must include details of:

(a) any proposed amendments to the Five Year Plan needed to protect public health or to ensure the effective operation of the Plan; and

(b) any additional water quality improvement actions identified in the preceding year through the Drinking water quality monitoring data or by NSW Health and action taken to implement them.

3.5 Drinking Water - Incident Management

3.5.1 Sydney Water must immediately report to NSW Health any information or event in the delivery of the Services or in its systems or operations which may have risks for public health.

[Note: The requirement for immediate notification for events of public health significance is also found in the Memorandum of Understanding between NSW Health and Sydney Water, November 2000.]

3.5.2 From the Commencement Date, Sydney Water must maintain the existing Drinking water quality incident management plan (Incident Plan) prepared to the satisfaction of NSW Health and that Incident Plan must remain in place until any new plan is developed in agreement with NSW Health.

3.5.3 The Incident Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of Drinking water incidents including media and stakeholder liaison and any notification to Consumers of public health advice received from NSW Health.

3.5.4 In preparing the Incident Plan under clause 3.5.2, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.

[Note: The requirement for a comprehensive incident management plan is also found in the Memorandum of Understanding between NSW Health and Sydney Water, November 2000.]

3.6 Other grades of water

3.6.1 Other grades of water supplied by Sydney Water must be supplied according to relevant guidelines specified by NSW Health, DEC, DIPNR and the Department of Primary Industries.

3.6.2 Other grades of water supplied by Sydney Water does not include Drinking water but does include Re-use water.

3.6.3 Where there is a conflict between any of the guidelines, requirements or standards applying to Sydney Water under clause 3.6, the Minister's decision will prevail.

Infrastructure performance 04

System performance standards

4.1 Water Pressure Standard

4.1.1 Sydney Water must ensure that no more than 15,000 Properties experience a water pressure failure in a financial year. This is known as the water pressure standard.

4.1.2 A Property experiences a water pressure failure if the Property experiences a pressure of less than 15 metres for a continuous period of 15 minutes or more measured at the point of connection of the Property to Sydney Water's water supply system, usually at the point of connection known as the "main tap".

4.1.3 For the purpose of the water pressure standard (including clause 4.7 and the Schedules), the following applies:

(a) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property;

(b) a Property is taken to have experienced a water pressure failure at each of the following times:

(i) 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

(ii) when Sydney Water's systems identifies that the Property has experienced a water pressure failure; and

(c) 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 in accordance with Schedule 6 or from abnormal demand (such as demand during fire fighting).

4.1.4 Clause 4.1.3 does not limit the circumstances in which a Property will have experienced a water pressure failure under clause 4.1.2.

4.2 Water Continuity Standard

4.2.1 Sydney Water must ensure that:

(a) no more than 32,000 properties experience a Planned Water Interruption exceeding 5 hours in a financial year; and

(b) no more than 35,000 properties experience an Unplanned Water Interruption exceeding 5 hours in a financial year.

This is known as the water continuity standard.

4.2.2 For the purpose of the water continuity standard, the following applies:

(a) in determining whether a Property experiences a Planned Water Interruption or 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;

(b) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property; and

(c) for the avoidance of doubt, a Property is taken to have experienced a separate Planned Water Interruption or an Unplanned Water Interruption for each period of 5 hours or more that the Planned Water Interruption or Unplanned Water Interruption (as the case may be) exists.

4.2.3 Clause 4.2.2 does not limit the circumstances in which a Property will have experienced a Planned Water Interruption or an Unplanned Water Interruption under clause 4.2.1.

4.3 Sewage Overflows on Private Property Standard

4.3.1 Sydney Water must ensure that no more than 25,000 Properties (other than Public Properties) experience an Uncontrolled Sewage Overflow in dry weather in a financial year. This is known as the sewage overflow standard.

4.3.2 For the purpose of the sewage overflow standard, each separately billed or separately occupied part of a multiple occupancy Property is a separate Property.

4.4 Compliance with performance standards

Sydney Water must comply with the water pressure standard in clause 4.1.1, the water continuity standard in clause 4.2.1 and the sewage overflow standard in clause 4.3.1.

4.5 Reporting on system performance standards

4.5.1 By no later than 1 September each year, Sydney Water must report to IPART on its compliance with the water pressure standard, the water continuity standard and the sewage overflow standard.

4.5.2 By no later than 1 September each year, Sydney Water must report to IPART on the number of Properties in the preceding financial year that experience the following:

(a) a water pressure failure;

(b) a Planned Water Interruption or an Unplanned Water Interruption;

(c) an Uncontrolled Sewage Overflow.

4.5.3 Sydney Water must maintain record systems sufficient to enable it to measure accurately its performance against the water pressure standard, the water continuity standard and the sewage overflow standard and to enable measurement and reporting by Sydney Water of those standards by delivery systems. Delivery system in this clause means the geographic classification used by Sydney Water for its own internal purposes, based on geographic regions forming part of the Services.

4.5.4 Sydney Water must provide IPART with physical or electronic access to the records kept by Sydney Water that enable it to report under clause 4.5.1.

4.6 Review of system performance standards

4.6.1 At least once during this Licence, IPART must consult with Sydney Water and other stakeholders and report to the Minister on whether the water pressure standard, the water continuity standard and the sewage overflow standard should be amended, and if so the nature of the amendments.

4.6.2 The report under clause 4.6.1 must include an analysis of the benefits and costs of any amendments.

4.6.3 Following receipt of the report the Minister, or a person appointed by the Minister, may publish a notice in the NSW Government Gazette which lists the amendments that must be adopted by Sydney Water.

4.6.4 Any amendments to the performance standards that must be adopted by Sydney Water under clause 4.6.3 must be incorporated into the Customer Contract as soon as reasonably possible and also considered as part of any review of the Customer Contract.

4.7 Service quality and system performance indicators

4.7.1 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 in Schedule 1.

4.7.2 Where there is any inconsistency between any of those indicators (or their application), the decision of IPART will prevail.

4.7.3 By 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART its performance against the service quality and system performance indicators in Schedule 1 for the immediately preceding financial year. The report must include an analysis of any problems of a systemic nature.

4.7.4 As part of its report, Sydney Water must provide IPART with physical and electronic access to the records kept by Sydney Water that enable it to report under clause 4.7.3.

4.8 Asset management obligation

Sydney Water must ensure that its Assets are managed consistent with;

(a) the terms and conditions in this Licence, and its obligations under the Customer Contract and all applicable laws with which Sydney Water must comply;

(b) subject to (a) above, the lowest life cycle cost and acceptable risk of the Assets;

(c) the whole of life of the Assets; and

(d) its assessment of the risk of loss of the Assets, and capacity to respond to a potential failure or reduced performance of the Assets.

4.9 Reporting on the asset management system

4.9.1 At least once during this Licence at a time agreed with IPART, Sydney Water must report to IPART on the state of each group of Assets managed by Sydney Water.

4.9.2 The report must include the following matters:

(a) a description of the processes, practices, systems and plans Sydney Water uses in managing the Assets;

(b) a description of each group of Assets;

(c) an assessment of the expected capability of the Assets to deliver the Services and meet the existing obligations consistent with this Licence, the Customer Contract and all applicable laws with which Sydney Water must comply;

(d) an assessment of the major issues or constraints on current and future performance of the Assets;

(e) the strategies and expected costs of future investment in Assets;

(f) progress in implementing the management of Sydney Water's Assets and any recommended improvements in processes, practices, systems and plans for the management of the Assets; and

(g) such other matters reasonably required by IPART.

4.10 Auditing the asset management system

4.10.1 At least once during this Licence IPART may (at a time it determines) conduct an audit of Sydney Water's compliance with clauses 4.8 and 4.9. The audit may form part of an Annual audit or be conducted separately from an Annual audit, at the discretion of IPART.

4.10.2 In addition, IPART may at any time audit Sydney Water's compliance with clauses 4.8 and 4.9 for the purpose of:

(a) investigating and reporting on, or reviewing the pricing of Sydney Water's Services under the IPART Act; or

(b) investigating compliance by Sydney Water with specific areas of its Asset management.

4.10.3 An audit undertaken under clause 4.10.1 or 4.10.2, must comply with the scope and audit specifications determined by IPART.

4.10.4 The provisions of clause 12 apply to an audit under clause 4.10 as if the audit under clause 4.10 is an Annual audit.

4.10.5 The Minister must be advised of any such decision to audit and, subsequent to the audit, be provided with a report on the outcomes of the audit.

4.11 Water leakage

4.11.1 Sydney Water must ensure that by 30 June 2009, the amount of Water leakage from its Drinking water supply system does not exceed 105 megalitres a day.

4.11.2 Each year Sydney Water must calculate the level of Water leakage from its Drinking water supply system using the assumptions and methodology approved by IPART.

4.11.3 On 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART on:

(a) the economic level of Water leakage for the preceding financial year and how that level of Water leakage is calculated; and

(b) its assessment of its progress towards compliance with clause 4.11.1

4.12 Reports related to water leakage

4.12.1 Sydney Water must report to IPART no later than 1 September 2005 and at the same time in each subsequent year on the number of bulk water meters in Sydney Water's Drinking water system that Sydney Water:

(a) intends to install in the current and subsequent financial years; and

(b) had planned to install in a financial year compared with the number actually installed in that financial year.

4.12.2 Sydney Water must report to IPART no later than 1 September 2005 and at the same time in each subsequent year on the number of water pressure control zones in Sydney Water's Drinking water system that Sydney Water:

(a) intends to complete in the current and subsequent financial years; and

(b) had planned to complete in a financial year compared with the number actually completed in that financial year.

4.12.3 On 1 September 2005, and on 1 September of each subsequent year, Sydney Water must report to IPART on the number of bursts, breaks or leaks (in the trunk and reticulation component of Sydney Water's Drinking water system between water treatment plants and a Property) which occurred in the immediately preceding financial year and the time taken by it to repair those bursts, breaks or leaks.

4.12.4 Sydney Water must report to IPART, no later than 1 September 2005 and at the same time in each subsequent year, on:

(a) the number of kilometres of reticulation mains it inspected during the preceding financial year for Water leakage; and

(b) its program during the preceding financial year for inspecting reservoir zones for Water leakage and for rehabilitating reservoir zones to prevent or correct Water leakage.

4.13 Response time for Water main breaks

4.13.1 Sydney Water's response to water main breaks and leaks (in the trunk and reticulation components of Sydney Water's drinking water 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, shall be as follows:

(a)	Priority 6 breaks/leaks:	70% of jobs within 2 hours 90% of jobs within 3 hours
(b)	Priority 5 breaks/leaks:	65% of jobs within 3 hours 85% of jobs within 6 hours
(c)	Priority 4 breaks/leaks:	50% of jobs by end of next working day 100% of jobs within 5 days, subject to clause 4.13.4

4.13.2 Categorisation of Priorities 4, 5 and 6 is to be finalised by IPART and published on Sydney Water's Internet site www.sydneywater.com.au

4.13.3 On 1 September 2006, and on 1 September of each subsequent year, Sydney Water must report to the Minister and IPART on the number of breaks or leaks (in the trunk and reticulation components of Sydney Water's drinking water system between water treatment plants and a property) which occurred in the immediately preceding financial year and Sydney Water's performance against the targets in clause 4.13.1. The Minister from time to time may adjust targets based on Sydney Water's performance.

4.13.4 Due to operational, planning and customer impact issues, it is recognised that Sydney Water will not be able to respond to 100% of priority 4 jobs within 5 days. Therefore Sydney Water shall annually submit to IPART a list of all instances of non-compliance with the above target and the reasons for that non-compliance. This will be reviewed as part of the annual operational audit.

4.14 Priority Sewerage

4.14.1 Sydney Water must meet the following requirements in relation to the "Priority Sewerage Program":

(a) By 30 June 2009 connection shall be made available to all lots eligible for connection under Stage 1 Priority Sewerage Program, excluding those lots in the area of Menangle/Menangle Park;

(b) By 30 June 2006 Sydney Water must report to the Minister on how it intends to service the area of Menangle/Menangle Park; and

(c) By 30 June 2009 work shall be commenced which, when completed, will permit connection to be made available to at least 30% of lots eligible for connection under Stage 2 Priority Sewerage Program and including those lots which are situated in areas adjacent to World Heritage areas.

4.14.2 Should Sydney Water incur delays caused by consent authorities that impair its ability to meet the above targets, Sydney Water is required to write to the Minister for Energy and Utilities, to advise the Minister of the reasons for the delay.

4.14.3 On 1 September 2006 and at the same time in each subsequent year Sydney Water must report to IPART on its assessment of its progress towards compliance with clause 4.14.1 and the reasons which lead it to reasonably believe that (as at the date of its report) it will or will not be able to comply with clause 4.14.1.

4.14.4 In this clause the Stage 1 Priority Sewerage Program is the program (incorporating the principle of least cost technology) for improving sewerage services in unsewered areas within Sydney Water's Area of Operations more fully described by the following:

(a) by Schedule 5; and

(b) announcements made by the Minister (and the Government of NSW) which may include announcements made under this Licence clarifying or amending paragraph (a), which announcements will prevail if they are inconsistent with paragraph (a) .

Customer and consumer rights 05

5.1 Customer Contract

5.1.1 The Customer Contract applies for the purpose of section 54 of the Act and may only be varied in accordance with section 59 of the Act.

[Note: Division 7 of Part 6 of the Act contains various provisions in relation to the Customer Contract. Section 59 of the Act requires that a variation of the Customer Contract must be published in a daily newspaper circulating in the Area of Operations at least 6 months before the variation becomes effective, or a shorter period of notice approved by the Minister. A copy of the notice must also be given to the Customer. Section 59 does not apply to an alteration of fees or charges where the alteration is in accordance with an IPART determination.]

5.1.2 Subject to section 56 of the Act, the Customer Contract automatically applies to persons specified in section 55(1) of the Act.

[Note: Section 55(1) of the Act provides that the owner of land connected to a water main or sewer main owned by Sydney Water is taken to have entered into a Customer Contract. By section 56 of the Act, the customer contract does not apply for unauthorised connections to a water main or a sewer main owned by Sydney Water].

5.1.3 The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided through systems required under this Licence. These rights and obligations are in addition to the rights and obligations conferred by the Act and any other law.

5.1.4 A copy of the Customer Contract, and any variations to it must be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge.

5.1.5 Unless otherwise required by the Minister, IPART must initiate a review of the Customer Contract during the term of the Licence. The review must:

(a) include an evaluation of the effectiveness of the financial hardship and other Customer protection provisions; and

(b) have regard to the system performance standards in clauses 4.1.1, 4.2.1 and 4.3.1, or as determined by the Minister under clause 4.6.3.

5.1.6 By the completion of the review, IPART must produce a report setting out its findings and recommendations. A copy of the report must be provided to the Minister upon its completion.

5.1.7 Sydney Water must take all steps necessary to issue an amended Customer Contract that addresses those recommendations of the review report adopted by the Minister within 3 months of the Minister's adoption of the review report.

5.1.8 Sydney Water must prepare a pamphlet that:

(a) provides a brief explanatory introduction to the Customer Contract;

(b) summarises the key rights and obligations of Customers, under the Customer Contract;

(c) refers to the types of account relief available for Customers experiencing financial hardship; and

(d) contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operations.

5.1.9 The pamphlet prepared under clause 5.1.8 must be updated when changes are made to the Customer Contract under clause 5.1.7 and must be disseminated by Sydney Water free of charge to:

(a) Customers, at least once annually with their quarterly or other bills; and

(b) any other person on request.

5.1.10 As provided by and subject to section 57 of the Act, Sydney Water may enter into other contracts or arrangements for the supply of Services. The terms of any such contract or arrangement are such as may be negotiated between Sydney Water and any such person.

5.2 Consumers

Sydney Water must fulfil its obligations under the Customer Contract relating to complaint handling and complaint resolution procedures as if those obligations also extended to Consumers.

5.3 Code of practice and procedure on debt and disconnection

5.3.1 Sydney Water must have in place a code of practice and procedure on debt and disconnection.

5.3.2 The code of practice and procedure on debt and disconnection must provide for:

(a) deferred payment or payment by instalment options for consumption bills; and

(b) the payment options referred to in (a) to be advised in consumption bills.

5.3.3 Sydney Water must include the code of practice and procedure on debt and disconnection in its Customer Contract.

5.3.4 Sydney Water must disseminate information on its code of practice and procedure on debt and disconnection free of charge to:

(a) Customers, at least once annually with their quarterly or other bills; and

(b) any other person on request.

5.4 Customer Councils

5.4.1 In accordance with the Act, Sydney Water must have in place and regularly consult with one or more customer councils to enable community involvement in issues relevant to the performance of Sydney Water's obligations under this Licence.

[Section 15 of the Act requires that the Licence set out the terms and conditions for Sydney Water to establish and consult with one or more Customer Councils].

5.4.2 A customer council may be utilised by Sydney Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Sydney Water and on the Customer Contract, in accordance with the terms of the relevant customer council charter, and on such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.

5.4.3 Sydney Water must appoint the members of a customer council, consistent with this Licence.

5.4.4 At all times, the membership of one or more customer councils must between them include a representative from at least each of the following:

(a) business and consumer groups;

(b) low income households;

(c) people living in rural and urban fringe areas;

(d) residential consumers;

(e) environmental groups;

(f) local government; and

(g) the Ethnic Communities Council.

5.4.5 Sydney Water may allow a representative under clause 5.4.4 to serve on so many customer councils as it considers appropriate to best discharge the tasks assigned to him or her.

5.4.6 The customer council or customer councils under this Licence must comprise:

(a) members of any customer council prior to the Commencement Date ("existing members"); and

(b) any other person appointed by Sydney Water, consistent with clause 5.4.4.

5.4.7 Subject to clause 5.4.8 the term of a member of a customer council (including the term of an existing member) will expire 2 years after his or her appointment.

5.4.8 At least half of the persons appointed as members of a customer council must be new members. That is, they must not be persons who were members of a customer council at any time during the period of 2 years before the date of their appointment.

5.4.9 No person may be appointed as a member of a customer council for more than 2 consecutive terms (including, without limitation, any term served as a replacement member under 5.4.10).

5.4.10 If a member's place becomes vacant before the expiration of their term, Sydney Water may appoint a suitable replacement for the remainder of that member's term.

5.4.11 If Sydney Water chooses to establish one or more customer councils the majority of members of which are not individuals, clauses 5.4.8, 5.4.9 and 5.4.12 do not apply to those customer councils.

5.4.12 Existing members will be eligible to be appointed for one term and other members for 2 consecutive terms. For the avoidance of doubt:

(a) existing members will be regarded as having served their first term at the end of the period, mentioned in clause 5.4.7; and

(b) replacement members appointed under clause 5.4.10 will be regarded as having served their first term at the expiration of the term of the member they replaced.

5.4.13 Within 3 months of establishing a customer council, Sydney Water must develop in consultation with members of each customer council, a customer council charter that addresses the following issues:

(a) the role of the customer council;

(b) selection criteria on how members will be drawn from the community;

(c) information on how the customer council will operate;

(d) induction processes for new members;

(e) a description of the type of matters that will be referred to the customer council;

(f) 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;

(g) communicating the outcome of the customer council's work to Sydney Water;

(h) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and

(i) funding and resourcing of the customer council by Sydney Water including sitting fees and expenses for members.

5.4.14 There must be a charter for each customer council. However a single charter may be expressed to apply to more than one customer council.

5.4.15 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 the customer council to discharge the tasks assigned to it.

5.4.16 Sydney Water must report annually on the issues considered by, and the achievements, of each of its customer councils. A copy of the report and each charter for a customer council must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its offices for access or collection by any member of the public, also free of charge.

5.5 Customer service indicators

5.5.1 Sydney Water must maintain record systems that are sufficient to enable it to measure accurately its performance against the Customer service indicators set out in Schedule 2.

5.5.2 By no later than 1 September 2006 and at the same time in each subsequent year , Sydney Water must report to IPART its performance against the Customer service indicators in Schedule 2 for the immediately preceding financial year.

5.5.3 The report must include an analysis of any problems of a systemic nature.

5.5.4 It will be sufficient compliance with this clause if the report required by this clause is integrated into the report required by Sydney Water under clause 4.7.3.

06 Complaint and dispute handling

6.1 Internal Dispute Resolution Process

6.1.1 Sydney Water must establish and maintain internal complaint handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Sydney Water.

6.1.2 The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS4269-1995 Complaint Handling.

6.1.3 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 procedure works.

6.1.4 Sydney Water must provide information of the nature described in clause 6.1.3 to Customers through their quarterly, or other, bills at least once annually.

6.2 External Dispute Resolution Scheme

6.2.1 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.

[Note: The industry based dispute resolution body at the commencement date of this Licence is EWON – the Energy and Water Industry Ombudsman of New South Wales.]

6.2.2 The industry based dispute resolution scheme so established by Sydney Water is subject to the Minister's approval.

6.2.3 Sydney Water must prepare a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed.

6.2.4 Sydney Water must provide the pamphlet to Customers through their quarterly or other bills, at least once annually.

6.2.5 Sydney Water must provide IPART with written reports of the determinations made by the dispute resolution body based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. Where considered appropriate by Sydney Water and the dispute resolution body, confidentiality arrangements are to be made so as not to disclose the Customer or Consumer's identity in such reports.

6.2.6 Sydney Water must report each year to IPART based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. The report must take into account any issues raised by the dispute resolution body and must contain the following information:

(a) the number and types of complaints received by the dispute resolution body, classified in accordance with the dispute resolution body's reporting arrangements; and

(b) any other relevant information required by IPART to be included in the report.

6.2.7 The report in clause 6.2.6 must be made available to the public free of charge.

6.3 Complaints to other bodies

6.3.1 Sydney Water must report to the IPART by no later than 1 September each year on all complaints made to Sydney Water in the preceding financial year that relate to its performance under this Licence or the Customer Contract that were referred for resolution by an external dispute resolution body (other than a court), for example the Consumer Trader and Tenancy Tribunal.

6.3.2 Sydney Water must report to the IPART by no later than 1 September each year on all civil actions in the preceding financial year that were brought against Sydney Water in all courts where the person bringing the action sought damages or other relief against Sydney Water for Sydney Water's failure to comply with a provision of its Customer Contract.

6.3.3 The reports required under clauses 6.3.1 and 6.3.2 must contain the following information:

(a) the number and types of matters;

(b) the outcome of the matters;

(c) if the matters were subject to a negotiated settlement, how they were settled;

(d) any problems of a systemic nature arising from the matters or which the matters uncovered; and

(e) any other information that IPART may reasonably request.

Environment – indicators and management 07

7.1 Environmental indicators

7.1.1 Each year Sydney Water must monitor, record, compile data and report on the environmental performance indicators in Schedule 3 for the immediately preceding financial year.

[Notes 14(1)(d) of the Act, provides that Sydney Water is to compile indicators of the direct impact on the environment of its activities (1) to enable preparation of an annual report of its performance and (2) to provide information for a year to year comparison in relation to its performance in this area.]

7.1.2 By no later than 1 September 2006 and at the same time in each subsequent year, (or an alternative later date specified by IPART), Sydney Water must report on its performance against the environmental performance indicators, in Schedule 3 in a manner to be approved by IPART.

7.1.3 The report must provide information which enables a year to year comparison in relation to Sydney Water's performance against the environmental performance indicators in Schedule 3. In particular, Sydney Water is to compare the performance indicators in Schedule 3 with historical annual values over at least the previous 10 years where comparable data is available.

7.1.4 The information in the report referred to in clauses 7.1.1 and 7.1.2 is to be made available to the public by Sydney Water. Copies of the information are to be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge.

7.2 Environment management

7.2.1 By no later than 1 month from the Commencement Date, Sydney Water must have in place an environmental management system certified to AS/NZS IS0 14001 to manage environmental risk.

7.2.2 Sydney Water must produce a five-year Environment Plan by 30 September 2005. Sydney Water must annually review and update the Environment Plan in accordance with its environmental management system referred to in clause 7.2.1.

7.2.3 Sydney Water must engage in Public Consultation in developing the Environment Plan required by clause 7.2.2.

7.2.4 The Environment Plan must:

(a) contain details of Sydney Water's program for environmental improvement for its water, waste water and stormwater strategies, as well as the environmental aspects of its other activities such as energy management, waste minimisation, heritage and Botany Wetlands;

(b) endorse Ecologically Sustainable Development principles;

(c) be integrated into Sydney Water's business plans,

(d) incorporate the objectives of the energy management plan of Sydney Water to:

(i) improve energy efficiency and generate renewable energy; and

(ii) minimise the environmental impact of its energy consumption; and

(iii) comply with all relevant energy related regulation; and

(e) incorporate environmental improvement targets and time tables for Sydney Water to achieve over the term of the Environment Plan.

7.2.5 The Environment Plan must be posted each year on Sydney Water's website on the internet for downloading free of charge, and made available at its premises for access or collection by any member of the public.

7.2.6 By no later than 1 September each year, or an alternative later date specified by IPART, Sydney Water must report to IPART on its progress for the previous financial year in meeting the Environment Plan. The report is to include Sydney Water's compliance with the targets and timetables in clause 7.2.4, and in managing the Botany Wetlands. The information in the report must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its premises for access or collection by any member of the public.

7.2.7 Each year Sydney Water must review the Environmental Plan by consulting with DEC, DIPNR, IPART, and peak environmental non-governmental organisations for the purpose of considering the views of those consulted organisations and whether they seek amendments to the Environmental Plan in the subsequent year.

7.3 Potable water use

7.3.1 Sydney Water must ensure that potable water use for treatment processes at each of the following sewage treatment plants has been reduced by 80% in volumetric terms from its 2003/04 usage rates by 30 June 2009 – Malabar, North Head and Bondi.

7.3.2 By 30 June 2009 Sydney Water must ensure that all sewage treatment plants (other than Malabar, North Head and Bondi, and storm flow sewage treatment plants at Fairfield, Bellambi and Port Kembla) use at least 85% recycled water for treatment processes.

7.3.3 Sydney Water must undertake potable water efficiency audits at all sewage treatment plants (other than Malabar, North Head and Bondi) and implement appropriate findings under a water conservation plan by 30 June 2009.

7.3.4 By no later than 1 September each year, Sydney Water must report to IPART on its progress in relation to clause 7.3.1, 7.3.2 and 7.3.3 for the previous 12 months, to enable the IPART to consider and report on the matter as part of the Annual audit.

7.4 Metering of individual units

7.4.1 Within 9 months of the commencement of this Licence, Sydney Water must;

(a) Conduct at least one trial to determine the costs and benefits and to identify any impediments to providing for each unit in new multi-unit buildings to have an individual meter which is read on a quarterly basis.

(b) Evaluate the outcomes of the trial and within 6 months of completion of the trial, provide a report to the Minister outlining the outcomes of the trial and Sydney Water's plans for future metering of units in multi-unit buildings.

08 Pricing

Sydney Water must set the level of fees, charges, and other amounts payable for its Services subject to the terms of this Licence, the Act and the maximum prices and methodologies for Sydney Water's Services determined from time to time by IPART under the IPART Act.

[Note: Division 8 of Part 6 of the Act governs the nature of fees and charges which may be imposed by Sydney Water. Under the terms of the Independent Pricing and Regulatory Tribunal Act, Sydney Water is a government agency for which IPART has standing reference to conduct investigations and report on the determination of pricing for services supplied and pricing policies.]

09 Water conservation and demand management

9.1 Water Conservation Target

9.1.1 Sydney Water must take action to reduce the quantity of water (other than Re-use water) it draws from all sources to meet the water conservation target of 329 litres per capita per day by 2010/2011 (being a reduction of 177 litres per capita per day or 35% from the 1990/1991 baseline).

[Note: The 1990/1991 baseline is 506 litres per capita per day.]

9.1.2 In assessing compliance with the water conservation target in clause 9.1.1, reasonable adjustments are to be made for the effects of weather on water usage.

9.1.3 By no later than 1 September each year, Sydney Water must report to IPART on its progress in complying with the water conservation target in clause 9.1.1 (which may include any targets for Water leakage), to enable IPART to consider and report on the matter as part of the Annual audit.

9.2 Demand Management Strategy

9.2.1 Sydney Water must give due consideration to demand side management as the basis for planning the future provision of its Services, including addressing Water leakage.

9.2.2 By no later than 1 September each year, Sydney Water must provide a demand management strategy implementation report to IPART that reports on its implementation of its demand management strategy for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.

9.2.3 The demand management strategy implementation report must:

(a) contain an estimate of past, current and projected water uses and distinguish between residential, industrial, commercial and government uses;

(b) describe the frequency and magnitude of expected supply deficiencies, including those arising as a result of wastage or loss, drought or emergency;

(c) identify conservation measures currently adopted and being practised;

(d) describe, cost and evaluate additional conservation measures;

(e) describe future plans for water reclamation and strategies to alter water use practices, including those relating to the installation of more efficient water appliances and devices by users;

(f) evaluate these plans in terms of their cost and contrast with the cost of alternative water supplies;

(g) prioritise and schedule the implementation of courses of action found to be cost effective;

(h) identify strategies for reducing water leakage;

(i) include components of a water balance table consistent with the format and definitions in the IWA water table;

(j) include consumption of water across sectors in a format and content specified by IPART; and

(k) for each of the demand management activities of Sydney Water in the preceding financial year, report in a schedule in a format and content agreed between IPART and Sydney Water:

(i) the planned and actual water savings and planned and actual expenditure; and

(ii) the actual measures of outcomes for performance indicators.

9.2.4 At least once during this Licence, Sydney Water must engage a suitably qualified third party to verify the accuracy and soundness of its mathematical models for projecting future demands for water usage and report the results to IPART.

9.3 Reducing discharges

9.3.1 Sydney Water must meet the Re-use water targets set by the Minister or Sydney Water from time to time.

9.3.2 Sydney Water must take action to generate Re-use water from the sewage or effluent of Customers and Consumers by intercepting or otherwise preventing the discharge of that sewage or effluent into the ocean, waterways and other waters.

[Note: Pursuant to Section 27(2) of the Sydney Water Act, in the Gazette of 30 June 2000 Sydney Water projected it could increase the amount of reuse of the sewage or effluent of Customers by between 4 and 59 megalitres per day by 30 June 2005 based on a baseline of 27 megalitres per day as at 30 June 2000.]

9.3.3 By no later than 1 September each year, Sydney Water must report to IPART on its progress in meeting the Re-use water target required under clause 9.3.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.

9.4 Water conservation rating and labelling

9.4.1 Sydney Water, through continuing support for any national scheme (whether legislated or not), is to encourage manufacturers of water appliances to improve the water use efficiency of these appliances where consistent with Sydney Water's objectives.

9.4.2 By no later than 1 September each year, Sydney Water must report to IPART on its performance under clause 9.4.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.

9.5 Review of Part 9 of Licence

During this Licence IPART may review Part 9 of the Licence if the Minister directs it to do so.

[Note: The New South Wales Government published "Meeting the Challenges – Securing Sydney's water future" known as the Metropolitan Water Plan 2004. IPART's review may consider government policies on water sharing, water recycling and other policies affecting Part 9 of the Licence.]

10 Licence authorisation and Area of Operations

10.1 What the Licence authorises and regulates

10.1.1 This Licence is granted to enable and require Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems for providing the Services throughout the Area of Operations.

[Note: The systems include those systems of Sydney Water necessary to enable it to provide the Services.]

10.1.2 Sydney Water must ensure that its systems and Services comply with the quality and performance standards required in this Licence or required to be developed under this Licence.

10.2 Powers not limited

This Licence does not restrict or affect Sydney Water's power to carry out any functions imposed under any applicable law.

10.3 Area of Operations

The Area of Operations may be varied only as permitted under the Act.

[Note: The Area of Operations for Sydney Water is listed in Schedule 4 of this Licence. Section 10 of the Act states that subject to certain requirements, the Governor may vary the Area of Operations by order published in the NSW Government Gazette. Such order does not take effect until after the notice of the order has been laid before Parliament.]

10.4 Connection of Services

10.4.1 Subject to Sydney Water continuing to be in compliance with any applicable law, Sydney Water must ensure that its Services are available for connection on request to any Property situated in the Area of Operations.

10.4.2 Connection to the Services is subject to any conditions Sydney Water may lawfully determine to ensure the safe, reliable and financially viable supply of Services to Properties in the Area of Operations in accordance with this Licence. Satisfactory compliance with the conditions of connection is an essential requirement for gaining Sydney Water's approval for connection of the land to a water main or sewer main under section 56(2) of the Act.

[Note: Sydney Water can authorise and approve connection to the Services under section 56(2) of the Act.]

10.5 Non-exclusive Licence

This Licence does not prohibit another person from providing services in the Area of Operations that are the same as or similar to the Services, if the person is lawfully entitled to do so.

11 Liability issues

11.1 Contracting out

11.1.1 Subject to the Act, the SOC Act and any other applicable law, Sydney Water may contract out the provision, construction, operation, management or maintenance of any of the systems and Services the subject of this Licence.

[Note: Section 91 of the Act permits Sydney Water to enter into contracts or arrangements with any person for such purposes.]

11.1.2 Contracting out under clause 11.1.1 does not relieve Sydney Water of its responsibility to comply with its obligations under this Licence.

11.2 Damage and compensation to persons

Sydney Water is required by the Act to do as little damage as practicable in exercising its functions under Division 4 of Part 6 of the Act, and to compensate persons who suffer damage by the exercise of those functions.

[Note: Section 41 of the Act provides that compensation may be made by reinstatement, repair, construction of work or payment.]

11.3 Competitive neutrality

11.3.1 Subject to the Act, the SOC Act and any applicable law, Sydney Water must comply, and must ensure that its Subsidiaries comply, with the competitive neutrality policies and guidelines adopted by New South Wales under clause 3 of the Competition Principles Agreement.

11.3.2 This Part is in addition to any obligations of Sydney Water under the Trade Practices Act 1974 and the Competition Code of NSW and other States and Territories as applicable.

[Note: For example Section 46 of the Trade Practices Act 1974 prohibits a corporation that has a substantial degree of power in a market from taking advantage of that power for the purpose of:

(a) eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market;

(b) preventing the entry of a person into that or any other market; or

(c) deterring or preventing a person from engaging in competitive conduct in that or any other market.]

12 Operational audits of this Licence

12.1 Commission of audits

12.1.1 IPART must initiate an operational audit of Sydney Water as soon as practicable after 30 June each year covering the preceding financial year, as required by this Part (the "Annual audit").

12.1.2 The Annual audit must be conducted by IPART or by a person appointed by IPART whom IPART considers is suitably qualified to perform the Annual audit. Neither Sydney Water nor any of its Subsidiaries may conduct the Annual audit.

12.1.3 As part of the Annual audit, IPART must invite members of the public to make submissions to it. IPART may also undertake any other Public Consultation it considers appropriate.

12.1.4 IPART may include in its Annual audit all or any of the matters referred to in clauses 4.10 or 12.2 and where in any Annual audit a matter is not made the subject of that Annual audit, IPART may require Sydney Water to provide IPART with a report on the matter not included in the Annual audit.

12.2 What the audit is to report on

12.2.1 IPART or the person undertaking the Annual audit must investigate and prepare a report on any of, or any part of any of, or all of, the following:

(a) compliance by Sydney Water with its obligations in each of Parts 3, 4, 5, 6, 7, 8 , 9, 10 and 11 (and any Schedules referred to in those Parts), of this Licence;

(b) Sydney Water's implementation of any Memorandum of Understanding; and

(c) any other matter required by this Licence, the Act or administrative direction to be assessed or considered as part of the Annual audit.

12.2.2 Despite clause 12.2.1, neither IPART nor the person undertaking the Annual audit may investigate a matter under clause 12.2.1 if the investigation of that matter is ordinarily within the regulatory activities of DEC, NSW Health or DIPNR and the relevant agency has undertaken an investigation of the matter.

12.2.3 Nothing in this Part restricts the capacity of IPART, as part of the Annual audit, from:

(a) satisfying the requirement in clause 12.2.1 to investigate and report on a matter under clause 12.2.1 by including in its report consideration of the findings and Sydney Water's response to the findings, of any investigation of the matter by DEC, NSW Health or DIPNR; or

(b) requesting Sydney Water to provide information relating to an investigation of a matter by DEC, NSW Health or DIPNR which is ordinarily within the regulatory activities of those agencies.

12.2.4 IPART must ensure the report of the Annual audit addresses the matters in clauses 12.2.1 (and the matters in clause 4.10 if the audit in clause 4.10 is conducted as part of the Annual audit) and must advise the Minister on the following matters:

(a) areas in which Sydney Water's performance under this Licence may be improved;

(b) any changes to the Licence and the Customer Contract that are considered necessary;

(c) any penalties or remedial action required as a result of Sydney Water's performance under the Licence;

(d) whether the Minister should recommend that Sydney Water's Licence be cancelled by the Governor under section 20 of the Act for reasons identified in the report; and

(e) any other matter relating to the Annual audit or IPART's functions in relation to this Licence considered appropriate.

12.3 Reporting of audit

12.3.1 IPART must ensure that the report of the Annual audit is presented to the Minister within 1 month after its receipt of the Annual audit.

12.3.2 Where the Annual audit report has identified non-compliance with this Licence, in addition to any other action that is taken or required to be taken, the Minister may require Sydney Water to promptly advertise publicly and notify Customers and Consumers, of the areas in which its performance has not complied, the reasons why and the measures that will be taken by it to address the non-compliance. Such advertisements and notices are to be in a form reasonably acceptable to IPART.

12.4 Additional audits

12.4.1 IPART must initiate additional audits of Sydney Water if required by the Minister.

12.4.2 An additional audit may address one or more of the matters in clauses 4.10 or 12.2.1 or any other matter required by the Minister.

12.4.3 The provisions of this Part applying to the Annual audit will apply equally to any additional audits or audit under clause 4.10 (all necessary changes having been made), to the extent that those provisions are relevant.

12.5 Provision of information

12.5.1 Sydney Water must provide IPART, and the person appointed by IPART under clauses 4.10 or 12.1.2, with all information within its possession or under its control necessary to the conduct of the Annual audit or an additional audit, including whatever information is requested by IPART or the person appointed by IPART.

12.5.2 The information sought under clause 12.5.1 must be made available within a reasonable time of it being requested.

12.5.3 For the purposes of any audit, (including any Annual audit or any additional audit or any audit under clause 4.10), or a report to IPART under clause 12.1.4, Sydney Water must, within a reasonable time of being required by IPART, or a person appointed by IPART, permit IPART or the person appointed to:

(a) have access to any works, premises or offices occupied by Sydney Water;

(b) carry out inspections, measurements and tests on, or in relation to, any such works, premises or offices;

(c) take on to any such premises, works or offices any other persons or equipment as necessary for the purposes of performing the audit or verifying the report;

(d) inspect and make copies of, and take extracts from, any books and records of Sydney Water that are maintained in relation to the performance of Sydney Water's obligations in accordance with this Licence; and

(e) discuss matters relevant to the audit or a report with Sydney Water's employees.

12.5.4 If Sydney Water contracts out any of its activities to third parties (including a Subsidiary) it must take all reasonable steps to ensure that, if required by IPART, any such third parties provide information and do the things specified in this Part that extend to Sydney Water as if that third party were Sydney Water.

12.5.5 For the purpose of any audit, or a report to IPART under clause 12.1.4, the information over which confidentiality or any form of privilege is claimed by Sydney Water or a Subsidiary or third party must be provided to IPART or the person appointed by IPART. IPART or the person appointed by IPART is required to enter into reasonable arrangements with Sydney Water or a Subsidiary or third party to ensure that the confidential or privileged information remains confidential or privileged.

13 Notices

Any notice or other communication given under this Licence is to be made in writing addressed to the intended recipient at the address shown below or the last address notified by the recipient.

Sydney Water Corporation
The Managing Director
Sydney Water Corporation
115-123 Bathurst Street
Sydney NSW 2000

IPART
The Chief Executive Officer
Independent Pricing and Regulatory Tribunal
Level 2, 44 Market Street
Sydney NSW 2000

14 Definitions and interpretation

14.1 Definitions

Act means the Sydney Water Act 1994.

Aesthetic guideline values are contained in the Australian Drinking Water Guidelines 1996 and mean the concentration or measure of a water quality characteristic associated with good quality water.

Annual audit is defined in clause 12.1.1 as the annual operational audit of Sydney Water.

Area of Operations means the area of operations specified in section 10(1) of the Act, a description of which is in Schedule 4.
[Note: Sydney Water has the same area of operations that Sydney Water Corporation Limited had immediately before it ceased to be a company State Owned Corporation. Section 10(1) requires that an operating licence contain a schedule that details the area of operations to which the operating licence applies.]

Assets mean the structures, plant, equipment, corporate and business systems of Sydney Water which cause, allow, or assist the delivery of its Services.

Australian Drinking Water Guidelines 1996 means the document so titled and published by the National Health and Medical Research Council and the Agriculture and Resource Management Council of Australia and New Zealand (as amended or updated from time to time and adopted by NSW Health from time to time) and which contains the following:

(a) health guideline values;
(b) aesthetic guideline values; or
(c) the concepts of good practice.

Commencement Date is the date by law on which this Licence commences.

Competition Principles Agreement means the Competition Principles Agreement made on 11 April 1995 between the Commonwealth, States and internal territories, as in force from time to time.

Complaint means a contact between any person and Sydney Water in which the person expresses dissatisfaction with Sydney Water's products, services, infrastructure, policy, actions or proposed actions or failure by Sydney Water, its employees or contractors to act.

Consumer means any person who consumes or uses the Services and includes, but is not limited to, a tenant or occupier.

Controlled Sewage Overflow is a Sewage Overflow that is directed by Sydney Water via a designed structure to a predetermined location such as a stormwater system or waterway in order to prevent overloaded or blocked sewers from discharging at sensitive locations, on private property or within buildings thus endangering public health or causing a public nuisance.

Customer means any person who is taken to have entered into a Customer Contract under section 55 of the Act, or to have entered into a contract on terms relating to the imposition of charges under sections 64 or 65 of the Act.

Customer Contract means the customer contract for the purpose of section 55 of the Act specified in Schedule 6 of this Licence.

DEC means the Department of Environment and Conservation.

DIPNR means the Department of Infrastructure Planning and Natural Resources.

Drinking water means water intended primarily for human consumption but which has other personal, domestic or household uses such as bathing and showering.

Ecologically Sustainable Development has the meaning given to that expression in the *Protection of the Environment Administration Act 1991*.

Environment Plan means a plan concerning the environment which contains, at a minimum, the details set out in clause 7.2.4.

Fluoridation Code has the meaning given to that expression in the *Fluoridation of Public Water Supplies Regulation 2002*.

Health guideline values are contained in the Australian Drinking Water Guidelines 1996 and mean the concentration or measure of a water quality characteristic, based on present knowledge, that does not result in any significant risk to the health of the Consumer over a lifetime of consumption.

IPART means the Independent Pricing and Regulatory Tribunal of NSW constituted by the *Independent Pricing and Regulatory Tribunal Act 1992*.

14 Definitions and interpretation

IWA water table means the water balance table in the document published by the International Water Association in October 2000 and entitled "Losses from Water Supply System: Standard Terminology and Recommended Performance Measures".

Licence means this operating licence granted under section 12 of the Act to Sydney Water or any renewal of it, as in force for the time being.

Memorandum of Understanding means a Memorandum of Understanding referred to in clause 2.3.

Minister means the Minister responsible for administering those provisions of the Act relating to this Licence.

Monitoring and reporting protocol has the meaning given to it in clause 2.4.

NSW Health means the NSW Department of Health.

Planned Water Interruption is an event which:

(a) commences when the supply of Drinking water at the first cold water tap of a Property is interrupted following receipt by the Customer or occupier of a prior Water interruption notice from Sydney Water of the interruption; and

(b) ceases when a normal supply of Drinking water is restored to the Property referred to in paragraph (a).

Priority Sewerage Program (Stage 1) – Stage 1 Priority Sewerage Program is the program (incorporating the principle of least cost technology) for improving sewerage services in the following unsewered areas within Sydney Water's Area of Operations: *Mulgoa, Wallacia, Silverdale; The Oaks, Oakdale, Belimbla Park; Jamberoo; Stanwell Park, Stanwell Tops, Otford, Coalcliff; Brooklyn and Dangar Island; Menangle and Menangle Park; Upper Blue Mountains; and Mount Ku-ring-gai Industrial Estate.*

Priority Sewerage Program (Stage 2) - Stage 2 Priority Sewerage Program is the program (incorporating the principle of least cost technology) for improving sewerage services in the following unsewered areas within Sydney Water's Area of Operations: *Agnes Banks, Londonderry; Appin, Douglas Park, Wilton; Bargo, Buxton, Yanderra; Cowan; Glossodia, Freeman's Reach, Wilberforce; Hawkesbury Heights, Yellow Rock; Austral, West Hoxton; Galston, Glenorie; Nattai; and Scotland Island.*

Property means any real property to which either or both of the following conditions apply:

(a) the real property is connected to Sydney Water's Drinking water supply system, Sydney Water's sewerage system or Sydney Water's recycled water system and a charge for the services provided by one or more of those systems is levied on the owner of the real property;

(a) the real property is within a declared stormwater drainage area for which a stormwater charge is imposed by Sydney Water upon the owner of real property in that area.

Public Consultation has the meaning given to it in clause 14.2.2.

Public property means real property vested in or under the control of a Minister of the Crown or public authority excluding so much of such real property as is leased, licensed or used for private purposes.

Re-use water means water derived from sewage treatment plants and untreated effluent extracted from sewers, which upon further treatment, is suitable for its intended re-use application.

Services means the following services of Sydney Water permitted by this Licence and any applicable law:

(a) storing and supplying water;
(b) providing sewerage services;
(c) providing stormwater drainage services;
(d) disposing of waste water; and
(e) recycled water.

Sewage Overflow is the discharge of untreated or partially treated sewage from any part of Sydney Water's sewerage system which may occur in dry weather or in wet weather.

SOC Act means the *State Owned Corporations Act 1989*.

Subsidiary has the meaning given to that expression in the SOC Act.
[Note: Section 3(1) of the State Owned Corporations Act 1989 defines a subsidiary to mean "a body corporate that is a subsidiary of a state owned corporation as determined in accordance with the Companies (New South Wales) Code or any other applicable law, and (in relation to a statutory SOC) includes a body corporate that would be such a subsidiary if the statutory SOC were a company SOC".]

Sydney Water means the Sydney Water Corporation constituted as a corporation by the Act.

Uncontrolled Sewage Overflow is a Sewage Overflow that is not a Controlled Sewage Overflow and will be taken to have commenced on the earliest to occur of the following:

(a) a person notifies Sydney Water that a Property (which may include a Public property) has experienced a Sewage Overflow which Sydney Water confirms is an Uncontrolled Sewage Overflow; and
(b) when Sydney Water's systems (which may include modelling undertaken by Sydney Water) identify that a Property (which may include a Public property) has experienced an Uncontrolled Sewage Overflow.

Unplanned Water Interruption is an event which:

(a) commences when the supply of Drinking water at the first cold water tap of a Property is interrupted without the Customer or occupier having received prior notice of that interruption from Sydney Water (and includes an interruption resulting from damage caused by a person, other than Sydney Water, or from a power failure); and
(b) ceases when a normal supply of Drinking water is restored to the Property referred to in paragraph (a).

Water interruption notice is a notice of the following duration issued by Sydney Water in relation to a Planned Water Interruption:

(a) 48 hours in the case of a Planned Water Interruption to which clauses 4.2 and 4.5 apply; and

(b) 24 hours in the case of a Planned Water Interruption to which clause 4.7 and Schedule 1 applies.

Water leakage means the water lost from Sydney Water's Drinking water supply system calculated by applying the methodology in the IWA water table, which at the Commencement Date involved determining that amount described in the IWA water table as the amount of "real losses".

Water main break means leakage of water from a water main that requires the water main to be isolated to allow repairs to be undertaken. Typically it involves the replacement of a section of pipe or a fitting such as a tee or bend. The severity of water main breaks may be prioritised for response with Priority 6 requiring the most urgent attention.

14.2 Interpretation

14.2.1 In this Licence, unless the contrary intention appears:

(a) the word person includes an individual, a body corporate, an unincorporated body or other entity and one or more of each of them;

(b) headings are for convenience only and do not affect the interpretation of the Licence;

(c) notes do not form part of this Licence but may be used to assist with interpretation if there is an ambiguity;

(d) words importing the singular include the plural and vice versa;

(e) a reference to a law or legislation (including the Act) includes regulations made under the law or legislation;

(f) a reference to regulations includes ordinances, codes, licenses, orders, permits and directions;

(g) a reference to a law or regulation, in this Licence includes consolidations, amendments, variations, re-enactments, or replacements of any of them;

(h) a reference to a person includes a reference to the person's executors, administrators, successors, substitutes (including, but not limited to, persons taking by novation) and assigns;

(i) a reference to a year means a calendar year that ends on 31 December. "Yearly" has a corresponding meaning;

(j) a reference to a financial year means a period of 12 months commencing on 1 July and ending on next following 30 June;

(k) a reference to a clause or Schedule is to a clause of or Schedule to this Licence; and

(l) a reference to a quarter is a period of three months beginning on 1 July, 1 October, 1 January or 1 April in a year.

14.2.2 If this Licence requires that something undergo Public Consultation, it requires as a minimum that:

(a) notice of that thing and the nature and timing of the consultation be:

(i) advertised in a major daily newspaper circulating in the Area of Operations;

(ii) communicated to government agencies, organisations and persons to whom it would reasonably be expected notice should be given notice;

(iii) displayed on Sydney Water's website,

(iv) given to the relevant Customer Council referred to in clause 5.4; and

(v) given to IPART.

(b) submissions be sought from the public and that these submissions be considered by the person conducting the review.

14.2.3 If any part of this Licence is prohibited, void, voidable, illegal or unenforceable, then that part is severed from the Licence but without affecting the continued operation of the remainder of the Licence.

14.2.4 A reference in this Licence to any organisation, association, society, group or body shall, in the event of it ceasing to exist or being reconstituted, renamed or replaced or if its powers or functions are transferred to any other entity, body or group, refer respectively to any such entity, body or group, established or constituted in lieu thereof or succeeding to similar powers and functions.

14.2.5 A reference in this Licence to a document (the 'original document') is a reference to the original document as amended, or revised or where the original document is replaced, by the replaced document, or the document that most closely approximates the original document.

14.2.6 Except where a contrary intention appears in the Licence, where there is disagreement between Sydney Water and IPART as to the proper interpretation of any term of this Licence, the matter must be referred to the Minister for resolution by the Minister.

14.2.7 Information provided to IPART under this Licence may be used by IPART for the purpose of an investigation or report under the IPART Act in relation to Sydney Water, or in the discharge of any function lawfully conferred on IPART.

SCHEDULE 1

Service Quality and System Performance Indicators

Service Quality and System Performance Indicator	Service Quality and System Performance Measure
Drinking Water	
1 Drinking water quality	• The percentage of water tests that meet the Australian Drinking Water Guidelines 1996 (for system performance monitoring for indicator organisms). • The number of complaints relating to Drinking water quality received by Sydney Water per 1000 Properties.
Water System Reliability	
2 Properties experiencing Planned Water Interruptions and Unplanned Water Interruptions	• The number of Properties (and the number expressed as a percentage of all Properties) which experience Planned Water Interruptions and Unplanned Water Interruptions (each separately identified) where the duration is: ○ less than or equal to 1 hour ○ more than 1 hour and less than or equal to 5 hours ○ more than 5 hours and less than or equal to 12 hours ○ more than 12 hours and less than or equal to 24 hours ○ more than 24 hours.
3 Frequency of Planned Water Interruption and Unplanned Water Interruptions	• For the total number of water interruptions (being all Planned Water Interruptions and Unplanned Water Interruptions): ○ the average number of Properties experiencing water interruptions in a financial year, calculated as the total number of Properties experiencing water interruptions divided by the total number of Properties ○ the average time of a water interruption, calculated as the total time for which each Property experiences a water interruption divided by the total number of water interruptions ○ the average time period Customers experience water interruptions, calculated as the number of Properties experiencing water interruptions multiplied by the average time taken to restore an interrupted supply divided by the total number of Properties.
4 Customers experiencing 2, 3, 4, 5 or more Planned Water Interruptions and Unplanned Water Interruptions	• The number of Properties (and the number expressed as a percentage of all Properties) which experience: ○ 2 Planned Water Interruptions ○ 3 Planned Water Interruptions ○ 4 Planned Water Interruptions ○ 5 or more Planned Water Interruptions. • The number of Properties (and the number expressed as a percentage of all Properties) which experience: ○ 2 Unplanned Water Interruptions ○ 3 Unplanned Water Interruptions ○ 4 Unplanned Water Interruptions ○ 5 or more Unplanned Water Interruptions.
5 Frequency of main breaks	• The number of bursts and leaks per 100 km of Drinking water mains in the trunk and reticulation system between water treatment plants and Properties, resulting in the Drinking water mains being shut down.

Service Quality and System Performance Indicator	Service Quality and System Performance Measure
6 Losses from the water system	• Water leakage
7 Response time to breaks	• The average time taken for Sydney Water to respond to breaks, bursts and leaks in Drinking water mains in the trunk and reticulation system between water treatment plants and Properties, resulting in the Drinking water mains being shut down. • Rate of compliance with response times for different leak categories indicated in Schedule 6.
8 Low water pressure	• The number of Properties (and the number expressed as a percentage of all Properties) experiencing a water pressure failure as described in clause 4.1.2 where the water pressure failure is: (a) Occasional or recurrent, but not permanent (b) permanent low pressure. • The number of Customer complaints relating to low water pressure where Sydney Water does not confirm the low water pressure failure or Sydney Water's systems do not identify that the Property has experienced low water pressure below the minimum pressure standard described in clause 4.1.2.
9 Repeat low water pressure	• The number of Properties experiencing more than one water pressure failure as described in clause 4.1.2, and the number expressed as a percentage of all Properties (not being Properties in permanent low pressure areas).
Sewerage system reliability	
10 Frequency of Uncontrolled Sewage Overflows and Properties affected	• The number of Uncontrolled Sewage Overflows occurring in dry weather, separately identifying those affecting Public Properties and those affecting Properties (other than Public Properties). • The number of Uncontrolled Sewage Overflows occurring in wet weather separately identifying those affecting Public Properties and those affecting Properties (other than Public Properties). • The average number of Properties (other than Public properties) experiencing an Uncontrolled Sewage Overflow in dry weather and in wet weather calculated as the total number of Properties (other than Public Properties) experiencing an Uncontrolled Sewage Overflow in dry weather and in wet weather divided by the total number of Properties.
11 Repeat Sewage Overflows	• The number of Properties (other than Public properties) experiencing more than one Uncontrolled Sewage Overflow in dry weather: ○ on 2 occasions ○ on 3 or more occasions. • The number of Properties (other than Public properties) experiencing more than one Uncontrolled Sewage Overflow in wet weather: ○ on 2 occasions ○ on 3 or more occasions.

SCHEDULE 1

Service Quality and System Performance Indicators

Service Quality and System Performance Indicator	Service Quality and System Performance Measure
	• The number of Public properties experiencing more than one Uncontrolled Sewage Overflow in dry weather: ○ on 2 occasions ○ on 3 or more occasions. • The number of Public properties experiencing more than one Uncontrolled Sewage Overflow in wet weather: ○ on 2 occasions ○ on 3 or more occasions.
12 Response times	• The number of events notified to Sydney Water to which Sydney Water responded (following receipt of the notice) in less than one hour and those to which it responded in more than one hour where the event was assessed by Sydney Water as: (a) a public health concern (b) likely to amount to significant damage to property (c) likely to have a significant environmental impact (d) an interruption of the sewerage service. • The number of events notified to Sydney Water to which Sydney Water responded (following receipt of the notice) in less than three hours and those to which it responded in more than three hours, where the event was assessed by Sydney Water as likely to amount to: (a) minor property damage (b) minor environmental impact (including unpleasant odours) not posing a significant health risk.
13 Restoration time	• The average time taken by Sydney Water to restore full normal sewerage service from the commencement of Uncontrolled Sewage Overflows that occurred in dry weather.
14 Frequency of breaks and blockages	• The number of sewer main breaks and blockages per 1000 Properties and the percentage of the breaks and blockages caused by tree roots. • The number of Property connection sewer breaks and blockages per 1000 Properties and the percentage of the breaks and blockages caused by tree roots; Where: "**sewer main**" means the main in the sewerage reticulation system between individual sewered Properties and sewage treatment plants, excluding Property connection sewers. "**Property connection sewer**" means a short sewer which connects the reticulation sewer main to the customer sanitary drain of a Property.

SCHEDULE 2
Customer Service Indicators

Customer Service Indicator	Customer Service Measure
1 Complaints	• Total number and the number per 1000 Properties of complaints received by Sydney Water.
2 Water supply reliability complaints	• The total number and number per 1000 Properties of complaints received by Sydney Water relating to burst water mains, leaks, and service interruptions.
3 Sewerage service quality and reliability complaints	• Total number and number per 1000 Properties of complaints received by Sydney Water relating to sewer blockages, overflows, spills and sewerage system interruptions. • The total number and number per 1000 Properties of complaints received by Sydney Water relating to sewage odour.
4 Stormwater and drainage complaints	• Total number and number per 1000 Properties of complaints received by Sydney Water relating to stormwater and drainage services. • Total number and the number per 1000 Properties of complaints relating to above ground flooding from stormwater and drainage services.
5 Billing complaints	• Total number and number per 1000 Properties of complaints relating to account payments, financial loss, billing errors or overcharging.
6 Affordability contacts	• Total number and number per 1000 Properties of contacts received by Sydney Water that are requests for instalment or deferred payment plans.
7 Other complaints	• Total number and number per 1000 Properties of complaints received by Sydney Water other than those to which Indicators 2-7 apply.

8 Customer Complaint Resolution	• The percentage of complaints received by Sydney Water that are resolved:
	  • within 2 days
	  • within 5 days
	  • within 10 days.

9 Telephone calls to a primary contact number	• Percentage of telephone calls received by a permanent primary advertised number of Sydney Water that are answered:
	  • within 15 seconds
	  • within 30 seconds.

10 Metered accounts where meter not read	• Percentage of metered accounts of Customers that receive a bill not based on:
	  • an actual meter read during the year
	  • a business meter read for two consecutive years.

11 Customer contacts	• The average time taken for a caller to Sydney Water to be connected to an operator.

SCHEDULE 2
Customer Service Indicators

Customer Service Indicator	Customer Service Measure
12 Instalment plans	• The total number and number per 1000 Properties of continuing instalment plans for two or more consecutive quarters (classified by residential and non-residential Customers).
13 Flow restrictions	• The total number and number per 1000 Properties having water flow restricted for non payment (classified by residential and non residential Customers), and the average amount owed to Sydney Water by Customers subject to water flow restriction (classified by residential and non-residential Customers).
14 Legal actions	• The total number and number per 1000 Properties on which legal action for non payment of account is taken (classified by residential and non residential Customers), and the average amounts owed to Sydney Water by Customers subject to legal action (classified by residential and non residential Customers).
15 Disconnections	• The total number and number per 1000 Properties of Customers disconnected for non payment of amounts owed to Sydney Water (classified by residential and non residential Customers).
16 Water flow restriction duration	• The average number of days for which water flow restrictions are applied to Customers and the percentage of water flow restrictions restored within 3 days and the percentage of water flow restrictions still in place after 14 days.
17 Flexipay Cards	• Number of Flexipay cards issued.
18 Payment Assistance Vouchers	• Number and value of payment assistance vouchers utilised.
19 Customer Contract Rebates	• The number and value of rebates paid pursuant to a Customer Contract in the categories in clause 7.2 of the Customer Contract.

[Note: At the Commencement Date of the Licence the categories in clause 7.2 of the Customer Contract were:

- *Planned interruption;*
- *Unplanned interruption;*
- *Low water pressure;*
- *Sewage overflow;*
- *Dirty water; and*
- *Boil water alert.]*

SCHEDULE 3
Environmental Performance Indicators

Environmental Performance Indicator	Environmental Performance Measure
Water conservation, reuse, recycling	
1 Potable Water drawn	• Total volume of potable water drawn by Sydney Water from all sources. • Potable water drawn expressed as a percentage of yield. • Potable water drawn expressed on a per capita basis.
2 Demand management	• Total volume of Drinking water demand saved on account of demand management programs (including savings due to water recycled and reduced unaccounted for water). • Cumulative dollars expended on demand management versus cumulative demand saved.
3 Water leakage	• Water leakage expressed as a percentage of potable water drawn.
4 Water recycled	• Total volume of sewage effluent reused / recycled (report volumes on-site Sydney Water premises and off-site). • Potable water use as a percentage of total water used at each sewage treatment plant as at 2003/2004. • Water recycled expressed as a percentage of total sewage effluent discharged. • Cumulative dollars expended on water recycling versus cumulative water recycled.
Water/effluent releases	
5 Sewage effluent volume	• The volume of sewage effluent discharged to the environment from inland sewage treatment plants and ocean sewage treatment plants
6 Sewage treatment plant (STP) effluent quality	• Total mass of phosphorus discharged to streams / rivers from inland STPs. • Total mass of nitrogen discharged to streams / rivers from inland STPs. • Total mass of suspended solids discharged from ocean STPs. • Total mass of grease discharged from ocean STPs. • Suspended solids capture rate for inland STPs and ocean STPs.
7 Breaches of statutory instruments	• Total number of breaches of conditions relating to environmental impacts under licences issued by DEC for the sewage treatment systems. • Total number of breaches of conditions relating to environmental impacts under licences issued by DEC for the water treatment plants.

SCHEDULE 3

Environmental Performance Indicators

Environmental Performance Indicator	Environmental Performance Measure
7 Breaches of statutory instruments	• Total number of prosecutions and Notices (including Penalty Notices) issued to Sydney Water under the *Protection of the Environment Operations Act 1997*. • Total number of prosecutions and Notices (including Penalty Notices) under the *Protection of the Environment Operations Act 1997* issued to contractors engaged by Sydney Water.
8 Overflows from the Sewerage System	• Total volume and total number of Controlled Sewage Overflows that occur in dry weather and in wet weather. • Total volume of Controlled Sewage Overflows that occur in dry weather and in wet weather, expressed as a percentage of total sewage effluent discharged to the environment.
9 Stormwater	• Total mass of silt and litter removed from Sydney Water's stormwater system in a financial year and the rainfall at Observatory Hill for the same period.
10 Recreational water quality	• Percentage of time recreational water complied with the recreational water quality guidelines as reported by DEC's Beachwatch and Harbourwatch.
Wastes and residuals	
11 Biosolids	• Total mass of biosolids produced by Sydney Water. • Biosolids reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.
12 Water treatment residuals	• Total mass of water treatment residuals produced by Sydney Water. • Water treatment residuals reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.
13 Trade waste	• Total mass of heavy metals received under trade waste agreements with Sydney Water.
14 Waste	• Solid waste generated by Sydney Water. • Waste recycled or reused expressed as a percentage of solid waste generated.

SCHEDULE 3
Environmental Performance Indicators

Environmental Performance Indicator	Environmental Performance Measure
Additional indicators	
15 Greenhouse gases	• CO_2 equivalent emissions through purchase of electricity, fuel and gas.
16 Electricity	• Total electricity consumed by Sydney Water. • Total electricity consumption by water assets expressed as a function of water supplied (KWh/ML of water supplied). • Total electricity consumption by sewer assets expressed as a function of sewage treated (KWh/ML of sewage treated). • Electricity consumption from renewable sources or generated by Sydney Water expressed as a percentage of total electricity consumption.
17 Contaminated land	• Number of sites under the control of Sydney Water that present a significant risk of harm as defined under *the Contaminated Land Management Act 1997*.
18 Heritage	• The number of State heritage listed sites with Conservation Management Plans prepared as a proportion of the number of State heritage listed sites without Conservation Management Plans prepared. • Number of impact permits granted in relation to Aboriginal cultural heritage under the *National Parks and Wildlife Act*.
19 Flora and Fauna	• Total area of clearing of native vegetation. • Total area of native vegetation gain due to site rehabilitation, restoration or replanting by Sydney Water.
20 Odour	• Total number of odour complaints generated from the sewage treatment plants or the sewerage system.
21 Noise	• Total number of noise complaints generated from Sydney Water's construction or operational activities.

SCHEDULE 4
Area of Operations

Area of Operations means the local government areas specified below, the islands in Sydney Harbour, the deemed areas described below, any special area or deemed special area under section 21 of the Water Board Act 1987 deemed to be a controlled area by section 88(3) of the Act or any special area, deemed special area or controlled area which continues in force by virtue of Part 2, Schedule 9 of the Act, as well as areas declared from time to time to be controlled in accordance with section 88 of the Act and any variation to the Area of Operations made by the Governor in accordance with section 10 of the Act.

Local Government Areas

Ashfield
Auburn
Bankstown (City)
Baulkham Hills
Blacktown (City)
Blue Mountains (City)
Botany
Burwood
Camden
Campbelltown (City)
Canada Bay
Canterbury
Fairfield (City)
Hawkesbury (City)
Holroyd
Hornsby
Hunter's Hill
Hurstville (City)
Kiama
Kogarah
Ku-ring-gai
Lane Cove
Leichhardt
Liverpool (City)
Manly
Marrickville
Mosman
North Sydney
Parramatta (City)
Penrith (City)
Pittwater
Randwick
Rockdale
Ryde
Shellharbour
Sutherland
Strathfield
Sydney (City)
Warringah
Waverley
Willoughby
Wingecarribee (Part)
Wollondilly
Wollongong (City)
Woollahra

Deemed Areas

Any land under the waters of Port Jackson and adjoining the boundaries of the City of Sydney upon which there is erected any wharf, pier, jetty, building, or other structure shall be deemed to be within the Area of Operations of Sydney Water.

[Note: Under section 10(1) of the Act, the Area of Operations for Sydney Water is the same as the area current for the Water Board as at the date of corporatisation. The Area of Operations for the Water Board was identical in extent to the Area of Operations proclaimed under the Metropolitan Water Sewerage & Drainage Board Act 1924.]

Priority Sewerage Program Stage 1 Lots – Sydney Water Area of Operations	
Area	**Number of Lots**
Upper Blue Mountains - Mt Victoria, Medlow Bath, Blackheath	1,400
Brooklyn, Dangar Island	575
Jamberoo	350
Menangle, Menangle Park	226
Mt Kuring-gai Industrial Estate	83
Mulgoa, Wallacia, Silverdale	1,182
Stanwell Park, Stanwell Tops, Otford, Coalcliff	852
Oaks, Oakdale, Belimbla Park	1,141
TOTAL	**5,809**

Priority Sewerage Program Stage 2 Lots – Sydney Water Area of Operations	
Area	**Number of Lots**
Agnes Banks, Londonderry	276
Appin, Douglas Park, Wilton	1,200
Bargo, Buxton, Yanderra	1,246
Cowan	239
Glossodia, Freeman's Reach, Wilberforce	1,494
Hawkesbury Heights, Yellow Rock	348
Austral, West Hoxton	135
Galston, Glenorie	633
Nattai	31
Scotland Island	380
TOTAL	**5,982**

SCHEDULE 6
Customer Contract

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SCHEDULE 6
Customer Contract

Foreword

Sydney Water provides drinking water, wastewater services and some stormwater services to more than four million people in Sydney, the Illawarra and the Blue Mountains.

For Sydney Water, providing excellent customer service is as important as our other key objectives of protecting the environment, protecting public health and operating as a successful business.

This Customer Contract outlines your rights and obligations as a customer and sets out the minimum standards of customer service that you can expect. It is our service guarantee to our customers.

For more information about Sydney Water and the services we provide visit www.sydneywater.com.au or call us on 13 20 92.

Introduction

1.1 Words used in this contract

Some of the words used in this contract have a special meaning. The meanings are set out in the Dictionary in Part 15 at the end of this contract.

1.2 Understanding the contract

There are a number of provisions in Part 15 at the end of this contract that may assist you in interpreting the contract.

What is a Customer Contract and who is covered by it?

2.1 What is a Customer Contract?

This contract is between us, Sydney Water and you, the customer.

This contract provides the terms under which we provide, where available, water supply, sewerage, trade wastewater and stormwater drainage services to you. The contract also sets out rights and obligations including your rights in any dispute with us.

This contract is a legally enforceable document and is a requirement of the Act.

This contract is summarised in a separate document called the customer pamphlet. Copies of this pamphlet are available from us.

2.2 Who is covered by this contract?

You are our customer and you are covered by this contract if you are the owner of property within our area of operations that is connected to a water main or sewer main owned by us, except where that connection has not been authorised or approved by us.

You are also our customer and covered by this contract (except parts 3, 6, 10 and clauses 8.1, 8.2 and 8.3.) if:

- you are the owner of property that is within a declared stormwater drainage area; or
- you are liable to pay us an availability charge and we have not exempted you from that charge or waived payment of that charge.

2.3 Other agreements with us

If you have a separate agreement with us (for example a trade waste agreement), this contract will apply so far as it is not inconsistent with that agreement.

We may enter a separate agreement with you for the provision of different levels of service where possible. Before entering a separate agreement with you, we will provide you with an estimate of the costs to supply you with the service requested and advise you if the service that we have agreed to provide is below the standards set out in this contract.

2.4 When does this Customer Contract commence?

This contract commences when notified in accordance with the Act.

On its commencement this version of the contract replaces any previous contract between you and us.

Any rights and liabilities that have accrued under any previous contract with us are not affected by the commencement of this contract.

What services does Sydney Water provide?

3.1 Water supply services

3.1.1 Supply of drinking water

We will supply a customer with drinking water to meet a customer's reasonable needs except:

- in the case of planned or unplanned interruptions, under clauses 3.4.2 and 3.4.3;
- in the case of drought under clause 3.4.4;
- where we are entitled to restrict or discontinue supply under clause 6; or
- in the case of events beyond our reasonable control.

3.1.2 Drinking water quality

The drinking water we supply a customer will comply with the health, taste and odour related guidelines provided in the Australian Drinking Water Guidelines 1996 as specified by NSW Health, and any other taste and odour related guidelines, as required by the Operating Licence.

3.1.3 Drinking water pressure

We will ensure that the drinking water we supply to your property is at a minimum pressure of 15 metres head at the main tap. We consider this to be suitable and adequate for most commercial customers and residential customers.

3.1.4 Supply of recycled water

In addition to being supplied with drinking water, we may supply you with recycled water intended for uses other than drinking, if:

- you have entered a separate agreement with us; or
- your property is within the Rouse Hill Development Area.

The recycled water we supply in the Rouse Hill Development Area will be at a minimum pressure of 15 metres head at the main tap, except as provided in this contract.

In all cases, the quality of recycled water we supply you will at a minimum comply with the relevant guidelines and requirements prescribed by NSW Health, the NSW Environment Protection Authority, the Department of Land and Water Conservation, the Department of Agriculture and other relevant government agencies depending on the intended use of recycled water.

If you are supplied with recycled water, we will give you information on the standard requirements for its safe use at the time we commence supply to you. We are not responsible for your use of recycled water contrary to the information we provide.

3.1.5 Health or special needs

If you require a water supply to operate a life support machine or for other special health needs you should notify us and we will provide a continuous water supply to meet your reasonable health needs.

We will also minimise the inconvenience to you, by contacting you in advance of any planned interruption or as soon as possible in the event of an unplanned interruption.

What services does Sydney Water provide?

3.2 Sewerage services

3.2.1 Supply of sewerage service

If your property is connected to our sewer system, we will supply you with sewerage services to meet a customer's reasonable needs for the discharge of domestic sewage except:

- where we are entitled to discontinue supply under clause 6; or
- in the case of planned interruptions and unplanned interruptions, under clauses 3.4.2 and 3.4.3; or
- in the case of events beyond our reasonable control.

3.2.2 Sewage overflow

We will make every reasonable effort to minimise the incidence of sewage spills on your property due to a failure of our sewer system.

If there is a sewage spill on your property due to the failure of our sewer system, we will ensure that:

- inconvenience and damage to you is minimised;
- the affected area is suitably and promptly cleaned up at our cost and in such a manner to ensure to minimise the risk to human health; and
- any rebates due to you under clauses 7.2 and 7.3 are paid.

3.2.3 Blockage of your sewer system

If a sewer becomes blocked, you are aware of the blockage and you suspect that it is a blockage in our system, you should notify us.

If the blockage occurs in our sewer system we will clear the blockage at our cost. You may be liable to pay to the extent you have contributed to the blockage.

If the blockage occurs in your sewer system, you are responsible for arranging the blockage to be cleared by a licensed plumber or drainer.

3.2.4 Trade waste

You may discharge trade wastewater into our sewer system only if you have obtained our written permission and entered into an agreement with us.

We will give you our written permission and enter into an agreement with you only if we are able to accept, transport and process trade wastewater that you discharge in full compliance with applicable safety and environmental laws, the Operating Licence and the Act.

You can contact us to obtain further information on the guidelines and standards for a trade waste permission.

3.3 Stormwater drainage services

We will provide you with a service for the transportation of stormwater through stormwater drainage systems under our control if your property is within a declared stormwater drainage area.

If your property is within a declared stormwater drainage area we will charge you the fee for this service set by the Independent Pricing and Regulatory Tribunal of NSW.

Maps are available from us for inspection to assist in determining whether your land is within a declared stormwater drainage area.

We will write to you if an area is declared a stormwater drainage area and it affects your property.

What services does Sydney Water provide?

3.4 Factors affecting service

3.4.1 Repairs and maintenance

If we undertake any work on or adjacent to your property, we will leave the affected area and immediate surrounds as near as possible to the state which existed prior to the works being undertaken, unless we have agreed to a different arrangement with you.

3.4.2 Unplanned interruptions

If there is an unplanned interruption to your water supply service or sewerage service, we will minimise the inconvenience to you by:

- restoring the service as quickly as possible;
- providing as much information as practicable on a 24 hour emergency telephone service (see clause 11.3). The telephone service will advise you how long the interruption is likely to last, and how to obtain supplies of water, where applicable;
- providing access to emergency supplies of water where reasonably practicable and necessary having regard to the particular circumstances.

3.4.3 Planned interruptions

We may need to arrange planned interruptions to your water supply services and sewerage services to allow for planned or regular maintenance of our sewer system or water system.

We will inform you in writing of the time and duration of any planned interruption, at least two days in advance if you are a residential customer, and seven days in advance if you are a commercial customer, unless you agree to another period.

We will use our best endeavours to ensure the planned interruption is no longer than five hours in one continuous period.

3.4.4 Restrictions in drought

If a drought is declared we may interrupt, limit or place restrictions on the supply of our water supply services to you during or on the approach of a drought. You must comply with our supply conditions during this time.

We will publish, in major newspapers throughout our Area of Operation, our drought supply conditions. These may include:

- restrictions on the use of water, including the purpose for which water may be used; and
- a variation of charges consistent with the Act and Operating Licence; and
- other conditions that we consider appropriate, including the period or likely period of restrictions or limitations on supply and usage of water.

We will also make every reasonable effort to notify you in your next account of drought supply conditions.

What you pay

4.1 Responsibility to pay the account

You must pay us the amount of your account by the date specified, unless you have been overcharged or undercharged - see clauses 4.5 and 4.6.

4.2 Publication of charges

We will publish, and provide you up to date information on our charging policies and current charges. This information will be provided to you on request free of charge.

4.3 Concessions

You are eligible for a government funded pension concession if you hold one of the recognised pensioner concession cards. You must apply to us for the concession and establish your eligibility.

If you are eligible, we will ensure that the concession is granted from the commencement of the next quarterly charging period after which your application for a concession was lodged.

To obtain information on whether you are eligible, contact us. On request, information about concessions will be provided in languages other than English.

4.4 Your account

4.4.1 When will your account be sent

We will issue you an account for the services that we provide. Residential customers will be sent an account on a quarterly basis, unless otherwise agreed.

Commercial customers with high water usage and sewage disposal may be sent an account on a monthly basis.

We will provide a printed statement of all outstanding amounts for the previous 12 months at any time on request, free of charge.

4.4.2 What information is on your account

We will ensure that your account contains details of:

- the account period to which it applies;
- the total amount due;
- the usage and service fees;
- other fees and charges payable;
- the date payment is due;
- your postal address and account number;
- the address of the property at which the charges in the account have been incurred;
- options for the method of payment;
- a comparison of your water usage where available;
- contact telephone numbers for account enquiries, emergency services, and TTY services;
- the payment assistance available.

4.4.3 How accounts are sent

We will send your account to the postal address you nominate.

If you do not nominate a postal address, the account will be sent to:

- the property to which the services are available or provided; or
- your last known postal address.

On your request we may send your account electronically (such as by facsimile transmission, or another electronic means of communication).

Your account will be considered delivered to you if it is sent by one of these means.

4.4.4 How payment can be made

We will provide the following payment methods and may, at our discretion, offer additional methods:

- in person;
- by mail;
- by direct debit;
- via the Internet.

4.4.5 Overdue account balances

We may charge you interest on overdue account balances at the rate applicable under s95(1) of the Supreme Court Act 1970, or other applicable fees.

4.5 Undercharging

If your account is less than what you are required to pay us (that is, we have undercharged you) as a result of our error, we may adjust your next account to charge the undercharged amount as a separate item.

If the undercharging is due to your providing false information or there has been an unauthorised connection or you have breached this contract or Act, you must pay the correct amount on request. We will state the amount to be paid as a separate item in your next account.

4.6 Overcharging

If your account is greater than what you are required to pay us (that is, we have overcharged you) due to our error, we will refund the amount of the overpayment by crediting your next account after we become aware of the error.

4.7 Account disputes

If there is an unresolved dispute concerning an amount of money to be paid by you, we will not seek the amount from you until the dispute has been resolved in our favour.

4.8 How prices are determined

We may vary charges from time to time, but only in accordance with our Operating Licence, the Act and the maximum prices and methodologies determined by the Independent Pricing and Regulatory Tribunal of NSW.

What you pay

4.9 Notification of price variations

We will notify you in writing of any variations to our charges. The variation will commence on:

- the date of your next account, or
- the next meter reading period in the case of variations in usage charges; or
- any other date we nominate after we have notified you of the change.

4.10 Other costs and charges

4.10.1 Dishonoured or declined payments

If payment of your account is dishonoured or declined, we may charge you the administrative fee set by the Independent Pricing and Regulatory Tribunal of NSW.

4.10.2 Installation and connection of service costs

You must pay the installation costs of a connection from your property to our water system or our sewer system.

Connection to our water system or sewer system must be approved by us and comply with the conditions we set to ensure the safe and reliable supply of services. The connection must be undertaken by a licensed plumber or drainer and in accordance with plumbing, drainage or other regulations or standards that may apply.

4.10.3 Charges for other matters

We may charge you a fee for any other services you request from us. You should contact us for further details of any ancillary service charges.

We may also charge you other fees, charges and amounts where we are entitled to do so under the Act.

What can I do if I am unable to pay my account?

5.1 Payment difficulties

If you are experiencing financial hardship you should contact us and we will provide you with information about the schemes available to assist you. All reasonable effort will be taken by us to provide assistance to you.

If you are experiencing financial hardship, you have the right to:

- be treated sensitively on a case by case basis by us;
- receive information from us on alternative payment arrangements;
- negotiate an amount you can afford to pay us on an agreed instalment plan;
- receive information from us about an accredited welfare agency for payment assistance;
- access the services of a language interpreter, if required, at no cost to you.

5.2 Account relief

If you are experiencing financial hardship we will offer you one of the following types of payment arrangement:

- an agreed instalment plan that is consistent with your capacity to make some form of regular payment;
- deferment of payment for a short period of time;
- access to a 'flexipay' card that allows payment of smaller, regular amounts, which may fit better with your income cycle;
- acceptance of one or more payment assistance scheme vouchers issued by an accredited welfare agency.

Commercial customers may be offered short term payment arrangements based on reasonable commercial considerations and market conditions.

If you enter into a payment arrangement with us and comply with it we will not take any legal action to enforce the debt or disconnection or restriction of the supply of water to your property.

Upon request we will confirm an instalment plan in writing.

Disconnection or restriction of water and sewerage services

6.1 Disconnection or restriction of supply for non-payment

If you fail to pay your account by the due date and have failed to make alternative arrangements for payment, we may disconnect or restrict the supply of water to your property in accordance with clauses 6.2 to 6.7 and our Code of Practice on Debt and Disconnection.

We will not take action to restrict the supply of water to your property, until we have provided you with notices under clause 6.2.

6.2 Notice of disconnection or restriction of supply of water

If you fail to pay your account by the due date we will send you a reminder notice. The reminder notice will:

- state that payment is immediately due;
- state that you should contact us if you are having difficulty making payment; and
- provide you with an explanation of alternative payment options.

If you fail to comply with the reminder notice, we will send you an 'outstanding debt' notice advising you that:

- your account is significantly overdue;
- you must pay the account within seven days otherwise we may take action to restrict or disconnect the supply of water to your property or legal action to recover the amount outstanding; and
- you may incur additional costs relating to us taking legal action to recover the amount outstanding.

If you fail to pay or make alternative arrangements to pay within the required seven days of receiving our 'outstanding debt' notice, we will send you a final notice which states that:

- you must pay your account within 48 hours; and
- the supply of water to your property may be restricted or disconnected without further notice.

We may restrict or disconnect the supply of water to you if:

- at least 48 hours have elapsed since we issued the final notice; and
- we have attempted to make further contact with you about the non-payment by means of a telephone call, mail, or visit.

The notices referred to in this clause will be sent to you in the same manner in which accounts are sent to you under clause 4.4.3.

6.3 Disconnection or restriction for other reasons

We may also disconnect or restrict the supply of water to your property in the following circumstances:

- if private works for the supply of water or sewerage to your property have not been authorised or do not comply with applicable laws;
- you have breached this contract, the Act, the Operating Licence or other agreement with us, concerning the use or taking of water;
- you discharge trade wastewater into our sewer system without a trade waste agreement with us;
- if a serious health or environmental risk is posed by the discharge of chemicals into our sewer system;
- if you have not installed a backflow prevention device prior to being connected to our water system;
- you use your recycled water in a manner inconsistent with its intended purpose or in a manner contrary to the information we provide on its safe use;
- where we are entitled or required to restrict or to discontinue supply by direction of the Minister or under an applicable law.

Disconnection or restriction of water and sewerage services

6.4 Minimum flow rate during restriction

If we restrict the supply of water to you, we will provide a flow sufficient for health and hygiene purposes. If you believe that the restriction will cause a health hazard you should contact us and we will consider increasing the flow.

6.5 Limitations on disconnection or restriction

Under no circumstances will we restrict or disconnect the supply of water to your property:

- without giving you the notices under clause 6.2;
- if you registered with us in accordance with clause 3.1.5 that you need water for a life support machine or for other special health needs;
- if there is an unresolved dispute as to the amount owing;
- if you are experiencing financial hardship and have entered into a payment assistance arrangement with us and you are complying with those arrangements;
- you have notified us that you have sought assistance from a welfare agency and that assistance is imminent;
- on a Friday, weekend, public holiday or after 3pm on a weekday.

We will not disconnect a residential property for non-payment and will not restrict the supply of water without first making a reasonable attempt to:

- provide reasonable notice to the occupier of the property that we intend to restrict the supply;
- provide the occupier with information on our Code of Practice on Debt and Disconnection;
- advise the occupier that in some circumstances the Act permits a tenant to pay outstanding charges and deduct them from rents otherwise payable;
- provide the occupier reasonable opportunity to pay the account.

6.6 Disconnection by a customer

You may disconnect your property from our sewer system or our water system provided that:

- you have complied with all applicable health, environmental and local council regulatory requirements;
- you have given us information we may reasonably require;
- you have given us 10 days written notice; and
- the disconnection is undertaken by a licensed plumber or drainer and conducted in accordance with plumbing, drainage or other regulations or standards that may apply.

On disconnecting your property, we may continue to charge you a service availability charge. You may apply to us to be exempted from this charge.

6.7 Restoration of supply after restriction or disconnection

When the reason for the disconnection or restriction of the supply of water no longer exists or if there is mutual agreement to restore supply, we will restore your supply:

- on the same day, if you pay or we agree to other arrangements before 3pm on any business day;
- on the next business day if you pay or we agree to other arrangements after 3pm.

When the conditions for restoration are met after 3pm, we may restore supply on the same day but you may be asked to pay an after hours reconnection fee.

Redress

7.1 Notification

If you notify us of a failure by us to comply with this contract or our activities result in inconvenience, damage or loss to you or your property we will promptly advise you of:

- your right to a rebate under clauses 7.2 or 7.3;
- redress options available under clause 7.4;
- how we may rectify your problem; and
- how to seek compensation from us under clause 7.5.

If your property is in an area that experiences recurring sewerage service overflows or interruptions due to a lack of capacity in our sewer system we will provide you with written information on redress at least annually.

7.2 Rebates

We will provide a rebate to you, for an occurrence of the following:

• Planned interruption

Where your water and/or sewerage services are interrupted for a period of longer than five hours and we have provided you the notice required under clause 3.4.3, you are entitled to an automatic rebate of 10 per cent of your quarterly water and /or sewerage service charge, subject to a minimum payment of $10. You will be eligible for this rebate for each and every event that you experience.

• Unplanned interruption

Where your water and/or sewerage services are interrupted for a period of longer than one hour and we have not provided you the notice required under clause 3.4.3, you are entitled to an automatic rebate of 10 per cent of your quarterly water and/or sewerage service charge subject to a minimum payment of $10. You will be eligible for this rebate for each and every event that you experience.

• Low water pressure

Where your water pressure is below 15 metres head at a main tap for a continuous period of 15 minutes, you will be eligible for a rebate of 10 per cent of your quarterly water service charge, subject to a minimum payment of $10. This rebate will be payable for one event each quarter. A rebate will be granted automatically when you are identified through our monitoring.

• Sewage overflow

If you experience a sewage overflow on your property due to a failure of our sewerage system, you are entitled to a rebate of 10 per cent of your quarterly sewerage service charge, subject to a minimum payment of $20. If you experience more than one event in a six month period the rebate outlined in clause 7.3 will apply.

• Dirty Water

If you are not provided with clean water suitable for normal domestic purposes, you may be entitled to a rebate of $10 or twice the value of the average maximum daily consumption of your property, whichever is greater.

If the cause of the problem is identified in your water system the rebate will not apply.

• Boil Water Alert

If NSW Health issues a 'boil water alert' due to contamination of drinking water caused by us, you are entitled to a rebate of $15.

We will pay the rebate in your next account where possible.

7.3 Rebates for recurring sewerage service disruption or internal overflows

If you experience more than one sewerage service disruption or internal sewage overflow on your property in any six month period due to capacity constraints in our system, you will be entitled to a rebate after the second event equal to the whole sewerage service charge for the next four quarters.

We may enter into an agreement with you to rebate part of your sewerage service charge where the sewerage service discontinuity or recurring internal sewerage overflow is due to faults in both our sewer system and your sewer system.

7.4 Redress

In addition to our obligation to pay a rebate under clauses 7.2 and 7.3, we may provide one of the following forms of redress:

- reinstatement;
- repair;
- rectification;
- construction of works;
- providing alternative supplies of water;
- emergency accommodation;
- payment for damages as set out in clause 7.5.

If you are unsatisfied with the form of redress we provide you, you may request additional redress from us. We will consider your request in accordance with the timeframes in clause 12.1 as if your request were a complaint.

7.5 Claim for damages

In the event of loss or damage to you or your property as a result of our activities or our failure to comply with this contract, the Operating Licence or Act, we may compensate you for any loss suffered.

A claim for damages must be in writing and must specify the nature of the problem and the type of compensation sought.

We will advise you within five working days of receiving your claim of:

- how we or our insurers will investigate the claim;
- a proposed response time for a representative of us or our insurers to visit your property (if required) and to make a decision;
- the name and contact details of the representative of our insurers or us who is able to advise you of the progress of your claim.

You will be provided with an assessment of your claim, in writing, within the time indicated. The written assessment will outline the reasons for the decision and the type of compensation to be provided, if any.

If you are not satisfied with our decision, you have the right to seek review of your claim under clause 12.2 or you may seek an external review under clause 12.4.

Redress

7.6 Limitation of liability

The only promises we make about the goods and services we provide under this contract, and the only conditions and warranties included in this contract are:

- those set out in this document; and
- those that the law (for example, the Trade Practices Act 1974) say are included.

However, where we are liable to you because of a breach of a condition or warranty that the law says is included in this contract, our liability is to the extent permitted by law, limited to:

- replacing the goods and services to which the breach relates; or
- at our option, paying you the cost of replacing those goods, or having the services supplied again.

The limitation of our liability does not affect rights you have under a law that applies to us that says we cannot exclude or limit our liability.

Responsibilities for maintenance

8.1 Water pipes

If you are a property owner, you own and are responsible for maintaining all of the pipes and fittings between our water system and the buildings and/or taps on your property. This is referred to as your water system.

As a property owner, you are responsible for any damage caused by a failure of your water system.

Upon notification of a failure, we will, as a service to you, repair your water system between our water system and the water meter. If the water meter lies more than one metre along the pipe inside your property, we will provide this service up to one metre inside the property boundary. If there is no water meter, we will repair your water system up to one metre within your property boundary closest to our water main. Your property includes any easement within which your meter or private service may be situated.

If you prefer that we do not repair a failure in your water system, you must have the fault repaired by a licensed plumber in accordance with the plumbing, drainage or other regulations or standards that may apply.

We are not responsible for the repair of:

- illegal services and water services installed contrary to our requirements;
- fire services;
- backflow prevention devices on non-residential properties;
- water services connecting to privately owned water mains such as in some Community Title subdivisions or shared private services;
- faults caused by your wilful or negligent damage.

We will also not meet the costs of installing new private services or modifying, upsizing or relocating existing private services.

8.2 Your sewer system

You are responsible for maintaining all sewer pipes and fittings between your property and the connection with our sewer system. This is referred to as your sewer system. The point of connection with our sewer system may be outside your property. If you do not know where the point of connection is, you should contact us.

8.3 Joint private water or sewer service

If you share a private joint water or sewer service you are responsible for the cost of its maintenance. The apportionment of costs incurred in its maintenance is a matter between you and others who share it.

8.4 Conserving water

You may install water efficient plumbing fixtures, appliances and equipment as recommended under the Water Conservation Rating and Labelling Scheme.

You may install water saving devices, for example:

- that collect and use rainwater for your own use provided that the water tanks are not directly connected to our water system. This is to avoid the risk of backflow contamination of your drinking water;
- a composting toilet that does not require connection to our water system or our sewerage system.

Health, environmental and local council requirements must be complied with when installing water saving devices and approval may be required from your local council.

On request, we will provide you information on how to conserve water.

Responsibilities for maintenance

8.5 Defective work

If we become aware of the presence of any defective or unauthorised work to your water system or your sewer system or stormwater drainage service that in our opinion is reasonably likely to significantly impact on the effective operation of our water system or sewer system, we may serve a notice on you requiring you to remedy the defective or unauthorised work within 24 hours.

If the defective or unauthorised work is unlikely to significantly impact on the effective operation of our water system or our sewer system, we will give you reasonable notice requiring you to remedy the defective or unauthorised work.

If you do not comply with the notice, we may undertake to remedy the defective or unauthorised work. You may be charged the cost incurred by us in undertaking this work.

8.6 Giving notice of system failures

You should inform us if you become aware of any failure of our water system or our sewer system. If you notify us of an interruption to your supply or a burst or leak in our system, we will ensure that the problem is attended to as soon as practicable.

8.7 Building work

You must not undertake building, landscaping or construction work which may interfere with or obstruct access to our water system or our sewer system without first obtaining our consent.

8.8 Altering and unauthorised connection or use

You must not:

- wrongfully take, use or divert any water supplied by us; or
- wrongfully interfere with the operation of a meter or prevent a meter from registering the quantity of water supplied by us; or
- wrongfully discharge any substance into a system owned by us.

You must obtain our consent before carrying out any activity that may cause destruction of, damage to, or interference with, our water system or our sewer system.

8.9 Removal of trees

If a tree on your property is obstructing or damaging our water system or our sewer system, or is reasonably likely to do so, we may require the removal of the tree at your cost.

We will give you 14 days notice in writing requiring you to remove the tree. You may with our consent and at your cost, take steps to eliminate the cause of damage or interference to our water system or our sewer system, without removing the tree.

We will reimburse you for reasonable expenses incurred in removing the tree if:

- you could not have reasonably known that the planting of the tree would result in the damage or interference; or
- an easement did not exist in favour of our system when the tree was planted.

If you fail to comply with the notice to remove the tree, by the specified date, then we may remove the tree and recover the costs of removal from you.

We cannot require a tree to be removed that is the subject of a protection or conservation order under the Heritage Act 1977, or the National Parks and Wildlife Act 1974, local council regulation or any applicable law.

Entry onto a customer's property for maintenance

9.1 Access to Sydney Water's system

You must ensure that we have safe access to your property, at all reasonable times during daylight hours to:

- maintain our water system and our sewer system; or
- to ensure that this Customer Contract, the Operating Licence or the Act is being complied with; or
- for other purposes set out in the Act or other applicable laws.

In case of an emergency we may require entry outside of daylight hours.

9.2 Identification

When we enter your property, our employees or contractors will carry identification that will be shown to you (or to any person present at the time of access).

9.3 Notice of access

We will give you, or the occupier of your property, two days written notice specifying the date, and approximate time of our entry onto your property, unless you agree to a shorter notice period.

We will not give you written notice in cases where:

- entry is required urgently; or
- the purpose is to read or exchange a meter; or
- giving notice would defeat the purposes of entry.

9.4 Impact on customer's property

If we enter your property we will ensure that we:

- cause as little disruption or inconvenience as possible;
- remove all rubbish and equipment we have brought on to the property;
- unless otherwise agreed, leave the property, as near as possible, in the condition which it was found.

You are entitled to compensation under the Act for damage incurred by our entering your property.

Water meter installation, testing and maintenance

10.1 Measuring water supplied

Unless we otherwise agree, a meter will measure the quantity of water that we supply you. You will be charged for the quantity of water measured by the water meter, unless the meter is faulty and we are required to adjust what we charge you under clause 10.3.

If a meter is stopped or damaged, an estimated consumption will be calculated on a basis which is representative of your consumption pattern.

Where no satisfactory basis exists to adjust a usage charge, we will negotiate with you a mutually agreeable adjustment of charges based on an estimated reading.

When the price of water or sewerage usage is varied on a date that falls within your meter reading period, we will apply the new price on a pro rata basis.

10.2 Water meter installation and maintenance

We will supply you with a meter of our choice unless otherwise agreed. A backflow prevention device of a type approved by us may be required to be fitted to the outlet of the meter. You are required to pay for the meter's installation and ensure that it is installed either by us or a licensed plumber.

The installed meter remains our property and we will maintain it.

We may charge you for the cost of repair or replacement of the meter if it is wilfully or negligently damaged by you.

We may charge you an unmetered service charge, if there is no meter or other instrument measuring the supply of water to your property.

10.3 Meter testing

If you consider that the meter is not accurately recording water passing through it, you may request that we test it. We will advise you of the meter reading results and make available a written report on your request.

You will be responsible for the costs of the test if the meter is shown to be accurate.

If the test shows that the meter is over recording, by more than three per cent of the actual quantity of water passing through it, we will:

- repair or replace the meter;
- refund any charge paid by you for the test; and
- adjust your account by calculating the measurement error on a basis which is representative of your consumption pattern.

We will endeavour to provide an actual meter reading once every 12 months, inclusive of meter readings taken by you on our behalf.

10.4 Access to the water meter

We may enter your property without notice for the purposes of reading, testing, inspection, maintenance and replacement of the meter.

You must ensure that the meter is reasonably accessible to us.

If you have not provided reasonable access to your meter, we may bill you on an estimate of your usage and may also recover the cost of the attempted meter reading.

Water meter installation, testing and maintenance

If you have not provided reasonable access to the meter for a reading on two or more occasions, we may:

- relocate the meter;
- seek access at a time suitable to you, which may incur an additional fee; or
- make other arrangements with you.

If you cannot provide reasonable access for reading the meter on an ongoing basis and we cannot come to a mutually acceptable solution, we may treat your property as unmetered and may charge you an unmetered service charge. The charging for an unmetered service charge does not affect our right to address meter access issues at any subsequent time.

10.5 Meter replacement

We will replace the meter at no cost to you if the meter:

- is found to be defective;
- can no longer be reasonably maintained; or
- is replaced as part of a meter replacement program.

We will attempt to notify you at the time of replacement and advise you that a new meter has been installed. A mutually acceptable time will be negotiated with commercial customers for the replacement of meters.

Who can I speak to if I have any questions or want to make enquiries?

11.1 Telephone enquiries

If you have a telephone enquiry relating to an account, payment options, concession entitlements or other information about our services, you may contact us during hours of 8.30 am to 5.30 pm, Monday to Friday.

Our contact phone number is provided on your account, in the customer pamphlet, and in the telephone directory.

If your enquiry cannot be answered immediately, we will provide a response to your enquiry within five working days of receiving it.

11.2 Written enquiries

You can also write, or send a fax, or email us.

Written enquiries should be sent to: Sydney Water, PO Box A53, Sydney South NSW 1232.

We have an Internet site (www.sydneywater.com.au) where you may find the answer to your enquiries.

We will reply to your written enquiry within five working days of receiving it by mail, where your matter cannot be responded to sooner by telephone or face-to-face contact.

11.3 Emergency assistance

In the event of a burst water main near your property or sewer overflow or unplanned interruption to supply or water quality or water pressure problems, we provide a 24 hour emergency telephone service.

Emergency phone numbers are listed on your account, in the customer pamphlet, and in the telephone directory.

11.4 Interpreter and TTY Service

We provide an interpreter service for people from non-English speaking backgrounds and a TTY service for the hearing impaired at our cost.

If I am unhappy with the service provided by Sydney Water what can I do?

12.1 Customer complaints

If you have a complaint about our service or our compliance with this contract, the Act or Operating Licence, you should first contact us, either by telephone, in person or by writing to us.

We will address your complaint promptly by providing:

- a face-to-face or telephone response within two working days where you have made a face-to-face or telephone contact and the matter cannot be dealt with immediately; or
- a written response within five working days where you have made a written complaint and the matter cannot be responded to sooner by telephone or face-to-face contact.

Our response will provide reasons for our decision and the name of the contact person for follow up enquiries if you are not satisfied.

If your complaint cannot be resolved within these timeframes, our response will advise you of our strategy of action and/or identify when the action will be taken and the name of the contact person if you are not satisfied.

12.2 Complaints review

If you are not satisfied with the solution offered or action taken by us, you may have the complaint reviewed by a Manager.

The Manager will:

- clarify your complaint and the outcome sought;
- ensure that the matter has been properly investigated;
- advise you of the estimated timeframe for our proposed action;
- communicate to you our final decision;
- outline the relevant facts and regulatory requirements where appropriate;
- indicate what we will do to address the issue;
- notify you of your rights to external review, if you are still not satisfied with our decision.

12.3 Resolution of disputes

12.3.1 When a dispute is considered resolved

A dispute will be considered finalised if we provide you with a substantive response which:

- resolves the dispute to your satisfaction or indicates how the dispute will be resolved to your satisfaction;
- provides an explanation of the relevant policy and/or regulatory requirements and why no further action is proposed in relation to the dispute; or
- provides a date when the issue will be resolved if the complaint relates to future planned operational or capital work; and
- 28 working days have passed since receiving our response and you have not sought a further review by us or lodged a claim in an external dispute resolution forum.

We will extend the 28 working days by a reasonable period if:

- within those 28 days you have requested an extension; or
- after the 28 days you demonstrate that, because of special circumstances, you were unable to seek an extension within the 28 days.

Where a further communication from you or your representative is received, this shall be regarded as a new enquiry or complaint.

Who can I speak to if I have any questions or want to make enquiries?

12.4 External dispute resolution

You have the right to seek external resolution of a dispute that has not been resolved by us to your satisfaction.

12.4.1 The Energy and Water Ombudsman

You have the right to refer a complaint or dispute arising under this contract to the Energy and Water Ombudsman (EWON).

EWON is an independent dispute resolution body that can investigate and resolve many disputes you have with us under this contract.

Disputes that may be referred to EWON include disputes about: supply of service, your account, credit or payment services, restriction or disconnection. Full details are available from EWON.

EWON's services are available to you without cost.

You may choose whether or not to accept EWON's decision. If you decide to accept it, then it will be final and binding on us.

12.4.2 The Fair Trading Tribunal

The Fair Trading Tribunal may hear and determine consumer claims relating to services supplied by us under this contract.

12.4.3 Other legal avenues

You may also have recourse to the courts.

Consultation, information and privacy

13.1 Involving customers in service planning

We have established Customer Councils to enable community involvement on issues relevant to our programs, services and decision-making processes.

Further information on the role and functions of Customer Councils may be obtained by contacting us.

13.2 Provision of information

We will respond in a timely and open manner to requests for information consistent with normal commercial practices and the Freedom of Information Act 1989.

13.3 Privacy

We will treat your personal information according to the provisions of the *NSW Privacy and Personal Information Act 1998*.

When does my Customer Contract with Sydney Water terminate?

14.1 Termination of this contract

This contract will terminate between us and you if you cease to be covered by this contract as described in clause 2.2.

The termination of this contract does not affect any rights or obligations of you or us that accrue prior to termination.

14.2 Variation of this contract

We may also vary this contract as permitted by the Act.

Section 59 of the Act provides that a variation of the Customer Contract must be published in a daily newspaper circulating in the Area of Operation at least six months before the variation becomes effective, or a shorter period of notice approved by the Minister. A copy of the notice must also be given to the Customer. This requirement to give notice of variations to the terms of the contract, does not apply to variations in charges and fees made in accordance with a determination of IPART.

Variations to this contract will be available on our website, on the Internet for downloading free of charge and from our offices for access or collection, also free of charge.

Dictionary and interpretation

15.1 Dictionary

Act	Sydney Water Act 1994 and any regulations in force under it.
Area of operation	the areas of operations specified in section 10(1) of the Act, and described in Schedule 2 of the Operating Licence.
Availability charge	a charge for access, rather than use of our sewerage or water service, where the land concerned is reasonably available for connection, as specified in section 64 of the Sydney Water Act 1994.
Charging period	any period for which your account was calculated.
Commercial customer	a customer who is not a residential customer. Customer is defined in clause 2.2.
Customer Council	a Customer Council established by us under section 15 of the Act and clause 5.4 of the Operating Licence.
Complaint	any communication received from you, a consumer or a representative of a consumer, which expresses dissatisfaction with a product, service or disservice of Sydney Water or its representatives, that relates to our obligations as set out in this contract, the Act, or our Operating Licence.
Disconnection	the stopping (either temporarily or permanently) of our supply of services to your property.
Dispute	a disagreement between Sydney Water and a customer or consumer which is not frivolous or vexatious.
Drought	a prolonged period of low rainfall resulting in an actual or potential water shortage.
Enquiry	a written or verbal approach by a customer which can be satisfied by providing written or verbal information, advice, assistance, clarification, explanation or referral about a matter.
Financial hardship	a situation where a customer desires to pay an account, but is unable to pay all or some of the account or is unable to pay by the due date.
Main tap	is the point of connection of your water system to our main.
Maintenance	includes repairs and replacement, and where relevant testing and inspection.
Operating Licence	the licence granted to us under section 12 of the Act.
Our water service	the services we are permitted to provide by the Operating Licence and any applicable law in respect to storing and supplying water.
Our sewer service	the services we are permitted to provide by the Operating Licence and any applicable law in respect to • providing sewerage services; and • disposing of wastewater.
Our water system	the water mains, pipes, treatment plants and other equipment which we must provide, manage, operate and maintain under the Act to supply and store water.
Our sewer system	the sewer mains, pipes and treatment plants and other equipment which we must provide, manage, operate and maintain under the Act to provide sewerage services and disposal of wastewater.

Dictionary and interpretation

Payment assistance arrangement	means any of the types of assistance described in clause 5.2.
Personal information	any information held by us that relates to the supply of services by us, where your individual identity is apparent or can be reasonably ascertained from the information.
Planned interruption	an interruption initiated by us to allow maintenance to be undertaken of which notice has been given to you.
Private joint water service	a private joint water service exists where two or more properties share the same private water pipes. Private joint water services have one connection to the water main, then extend through each property's plumbing fixtures. Customers with a private joint water service share and own the service in common with each property owner, and are jointly responsible for its condition. Property any real property that is connected to, or for which a connection is available to, our water supply system or our sewerage system or is within a declared stormwater drainage area. Recycled water water that is not suitable for drinking at the time of supply by us.
Residential customer	a customer who: • owns real property which is used as a principal place of residence; or • owns real property used for public cemeteries, common gardens or public reserves on which the carrying on of a trade or business is prohibited.
Restriction	a direct intervention in the supply system by Sydney Water in order to reduce flow to a customer's property.
Sewage	all liquids and any substances in them, which may be produced by the use of toilets, hand basins, urinals, sinks, baths, showers, washing machines and similar items when used by persons for their personal hygiene.
Sewage overflow	a discharge of untreated or partially treated sewage from our sewer system. These overflows may occur in wet or dry weather.
Trade wastewater	any liquid, and any substances contained in it, which may be produced at the premises in an industrial or commercial activity, and any vehicle transporting wastewater, including septic effluent and wastewater from ships and boats. Trade wastewater does not include domestic wastewater from premises connected to Sydney Water's sewer. The term trade wastewater as used in this document includes run off from contaminated open areas.
Unplanned interruption	an interruption which is caused by a fault in our water system or a fault which is our maintenance responsibility and no notice has been given to you.
Your sewer system	is defined in clause 8.2.
Your water system	is defined in clause 8.1.
You or your	our customer.
We, our or us	Sydney Water Corporation, established under the Act, including its officers, employees, agents and contractors.

Dictionary and interpretation

15.2 Interpretation

A person includes an individual, a body corporate, an unincorporated body or other entity.

The law includes legislation, regulations, licences, orders, mandatory codes, permits and directions.

A working day is a day other than a Saturday, Sunday or public holiday in New South Wales.

The singular includes the plural and vice versa.

If there is any inconsistency between this contract and any law, the law will prevail to the extent of the inconsistency.

The reference to document, instrument or law includes any amendments, revisions, renewals or reprints from time to time.

Where a word is defined, any other grammatical form of that word has a corresponding meaning.

Printed on recycled paper
SWC 479 June 2005

Sydney WATER

Appendix D

Ministerial Requirements

ATTACHMENT 2 SUMMARY OF MINISTERIAL REQUIREMENTS

Summary of Ministerial Requirements arising from the 2005/2006 Operational Audit

Issue	Requirement
Implement revised flowmeter installation program ***M1***	*"I require that Sydney Water achieve the revised flowmeter installation program set out in the Corporation's letter to Minister Campbell dated 8 August 2006. This entails the installation of 40 flowmeters before 30 June 2007 and installation of the remaining 28 flowmeters before 30 September 2008."*
Clarification of Leakage Response Times ***M2***	*"The revised Sydney Water Operating Licence includes a requirement that Sydney Water achieves certain response times to water main breaks and leaks. Response times have been established according to a set of priorities reflecting the severity of the water loss situations. In cases where the priority of a water loss situation is upgraded as a result of experienced "on-site" analysis, I concur with the Tribunal's suggestion that the response time relevant to the amended priority should commence when this amended priority is established. I would be grateful if Sydney Water could reach agreement with the Tribunal to incorporate this clarification into the Monitoring and Reporting Protocol."*

Appendix E

Risk based audit methodology

CLIENTS | PEOPLE | PERFORMANCE

Independent Pricing and Regulatory Tribunal

Report for Risk-based Operational Audits

Development of a risk-based approach

July 2007

INFRASTRUCTURE | MINING & INDUSTRY | DEFENCE | PROPERTY & BUILDINGS | ENVIRONMENT

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D Sydney Catchment Authority Audit program matrix

1. Introduction

1.1 Background

GHD Pty Limited (GHD) was commissioned by the Independent Pricing and Regulatory Tribunal (IPART) to develop a risk-based audit scope for the 2006/07 operational audits of the *Sydney Catchment Authority (SCA) and the Sydney Water Corporation (SWC).*

In applying a risk-based approach, the Tribunal is aiming to improve the effectiveness and efficiency of the auditing of these utilities without increasing the risk to the key stakeholders, including the community, the utilities, IPART, or the NSW Government.

The performance of the utilities is audited against the requirements of the Operating Licences on an annual basis. The Operating Licence is a statutory permission to conduct business under the provision of the Licence.

This report presents the methodology applied by GHD to develop the risk-based audit approach and the recommended scope of the audit for the forthcoming 2006/07 audit period for both the SCA and SWC.

1.2 Background and regulatory requirements

As the Licence Regulator for SWC and SCA, IPART exercises the following functions:

- Makes recommendations to Government with respect to the granting amendment or cancellation of the Operating Licences;[1]
- Monitors and reports to Government on the agencies' compliance with the provisions of the Operating Licences;[2],
- Advises the Government on appropriate penalties or remedial action in response to an agencies' performance against its Operating Licence[3]; and
- Imposes monetary penalties or requires other actions in the event that an agency knowingly contravenes its Operating Licences.

Currently, the Tribunal uses the information gathered as part of the annual operational audits to monitor and report to Government on the agencies' compliance with their Operating Licences. The respective Acts require that IPART, *"ensure that the operational audit is prepared in accordance with the Operating Licence".*[4] The Tribunal reports to the portfolio Minister on compliance of SWC and SCA with its respective Operating Licence and then the respective Ministers, subsequently, lay the annual audit reports before Parliament.

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[1] See section 28(1)(a) *Sydney Water Act 1994* and section 30A(1)(a) *Sydney Water Catchment Management Act 1998*

[2] See section 28(1)(b) *Sydney Water Act 1994* and section 30A (1)(b) *Sydney Water Catchment Management Act 1998*

[3] See section 28 (1)(c) *Sydney Water Act 1994* and section 30A(1)(c) *Sydney Water Catchment Management Act 1998*

[4] See section 31(1) *Sydney Water Act 1994* and section 30 A (1)(a) *Sydney Water Catchment Management Act 1998*.

Since 2000, IPART has undertaken annual audits of the Operating Licences of SWC and SCA. Five-year Operating Licences were awarded to Sydney Water, commencing in June 2005, and the Sydney Catchment Authority, in April 2006.

The provisions of these Operating Licences include:

- An '*auditable field'* of requirements as set out in the Licence;
- Discretion by IPART to audit all or part of the *'auditable field'*, and
- Utilities reporting to IPART on performance against those items in the *'auditable field'* that were not considered as part of the operational audit.

These requirements allow IPART to set in place a risk-based audit, where the Tribunal can decide on the scope of the audit within the *"auditable fields".*

The potential benefits of such an approach include targeting auditing resources to areas of higher risk and reducing the total audit expenses, if a more effective and efficient auditing regime can be developed. IPART will also need to assess if such benefits are being delivered whilst retaining confidence in the auditing process and the utilities performance under the Operating Licences.

1.3 Objective of this project

The objective of this project is to assist IPART in implementing a risk-based approach to the audits of the Operating Licences for SWC and SCA in 2006/07 and, in so doing:

- Develop a risk-based methodology, consistent with *Australian/New Zealand Standard AS/NZS 4360:2004 Risk Management,* to audit the requirements of the SWC and SCA Operating Licences and to determine an audit priority;
- Develop a risk-based Audit program (5 year) to assess the agencies' compliance with the respective Operating Licences;
- Facilitate discussion between IPART, the utilities and stakeholders on the methodology and the proposed risk-based Audit program;
- Recommend to IPART the Audit scope for both SWC and SCA for the forthcoming 2006/07 audit period; and
- Recommend the level of reporting required for clauses excluded from the audit scope.

IPART would then consider GHD's recommendations, the comments received from the agencies and stakeholders, and finalise appropriate risk-based Audit programs for the SWC & SCA, for the 2006/07 audit period.

In pursuing the above objectives, and following a review of similar risked-based audit projects from other Australian States, it was evident that the project needed to:

- Be based on the Australian Standard for Risk Management;
- Be practical and, ideally, simple in implementation; and
- Recognise it was an initial step in the application of risk-based auditing.

In terms of the first of these needs, the methodology is based on *AS/NZ 4360:2004 Risk Management,* which a systematic approach to bring consistency and

reproducibility to the process. However, the Standard recognises that interpretation and judgement (for example, as to the *likelihood* or *consequence* of an event occurring) is a fundamental component in its application. Where interpretation and judgement has been applied, the respective GHD auditor, skilled and experienced in the discipline (for example, water quality or system performance), guided the process. Adopting this approach provided both transparency and consistency (namely, judgement was applied in the same manner as it had been in assessing compliance over the previous five audits of the Operating Licences).

Further, the project needed to be simple and clear in its implementation. Efforts were made to minimise the final number of levels and frequency of auditing.

Finally the project was an initial step in risk-based auditing for IPART and the utilities. If improved effectiveness and efficiency of the auditing process are demonstrated, over the forthcoming years, then the opportunity for further revisions is available. If, however, improved performance is not evident then some winding back of the approach may be needed. Therefore, the initial recommendations have, where necessary, erred on a *'cautious approach'* pending a clear demonstration, by the utilities, of the benefits of a risk-based auditing approach. These benefits should not only accrue to the utilities but also to the people of NSW in the confidence that they have in the utilities' performance and the compliance system that is used to assess this performance.

1.4 Scope of work

The scope of work, to be completed for both SWC and SCA, is summarised below:

- Develop a risk-based methodology, consistent with the *AS/NZS 4360:2004 Risk Management,* to the audit Licences;
- Tabulate an audit priority for each Licence condition (or group of conditions);
- Recommend a proposed Audit scope for the 2006/07 audit using the (tabulated) audit priority;
- Analyse the reporting obligations in the Licences;
- Prepare a draft report and provide a formal briefing to IPART on the methodology and recommended Audit program;
- Incorporate IPART's comments and undertake a workshop with key stakeholders; and
- Finalise the findings and recommendations to a report.

The detailed methodology applied against each one of the tasks is described in Section 2 of this report.

1.5 Context of the key players

It is recognised that there are varying degrees of risk associated with the provision of bulk water, potable water and sewage services. Key players in the supply of these services have, and apply to a varying degrees, *controls* to manage these risks, as outlined below.

- *Stakeholders,* including Peak Environmental Non Government Organisations (PENGOs), such as the *Total Environment Centre*, have the capacity to influence policy. This influence can be exercised through engagement of Government or direct lobbying to identify, prioritise and manage perceived risks.
- *Regulators,* such as IPART, Department of Health and Department of Environment & Climate Change, have the capacity to influence and direct actions of the utilities through the vehicles of legislation, regulations and licences, monitoring and reporting compliance.
- *Service Utilities,* namely SWC and SCA, have the capacity to actively manage risk through a wide range of management and operational tools, (including infrastructure provision and management, development and implementation of management systems, policy, protocols and procedures, modelling, compliance programs, stakeholder engagement, risk assessments, investigations and reporting).

1.6 Context of IPART's auditing regime

IPART, as a regulator, applies its *control* on the utilities primarily by administering the SWC and SCA Operating Licence and has a statutory requirement to report the compliance of these utilities with their respective Licences to the NSW Government.

IPART therefore has to make a *determination on the level of compliance monitoring* required in order to gain adequate confidence in the performance being reported by the utilities.

In the past IPART has relied, primarily, on annual audits of the whole Operating Licence by a third party to monitor and report compliance. By applying a risk-based assessment to this process, the regulatory effort can be focused on providing improved assessment in the areas (clauses) of greatest risk and reduced assessment in the areas (clauses) of lesser risk.

In effect, IPART's auditing regime is "… a process designed to provide reasonable assurance regarding the achievement of objectives."[5] Therefore, any change in the auditing regime must be implemented in a manner that does not diminish the Tribunal's control of risk. This risk assessment process was undertaken within this context.

[5] AS4360:2004, Page 2 (part definition of "Control").

2. GHD process for developing the risk-based methodology

The approach outlined in this report was applied by GHD to develop a methodology for the assessing the risk associated with each clause of the SWC and SCA Operating Licences and to:

- Develop an Audit program for the term of the Licence, being five years; and
- Define the terms of reference and scope for the next (2006/07) audit.

The methodology is graphically presented in **Figure 1**.

2.1 GHD risk assessment workshop

Following the categorisation of clauses, GHD's technical specialists/auditors participated in a workshop to rank the risks associated with both the SCA and SWC Licence clauses, to develop a preliminary scope of audit for the 2006/07 year, and to develop an overall Audit program for the five years 2006/2011. The GHD workshop participants included specialists with extensive experience in the audit of SCA or SWC and are listed in **Appendix A.**

The key tasks undertaken at the risk assessment workshop are outlined in **Figure 2.**

2.2 Consultation with SWC and SCA

The primary objective of consultation with SWC and SCA was to gain input and comment into the risk assessment process prior to the Stakeholder workshop. GHD met with SWC and the SCA, separately. As part of the meetings GHD:

- Outlined the GHD brief and the scope of the study;
- Outlined the proposed methodology for risk assessment;
- Provided a copy of the preliminary assessment;
- Worked through some examples to demonstrate how the methodology was applied;
- Considered opportunities and concerns raised by the utilities;
- Provided broad definitions to the levels of audit proposed; and
- Sought information from the SWC on its risk assessment process.
- In turn the utilities:
- Provided *in principle* agreement with the methodology applied by GHD;
- Requested further clarification be provided on components of the process; and
- Raised concerns that the outcome of the process would not notably reduce the *"regulatory burden"* or provide *"audit holidays"* for low risk clauses in some audit years.

Figure 1 Project Methodology

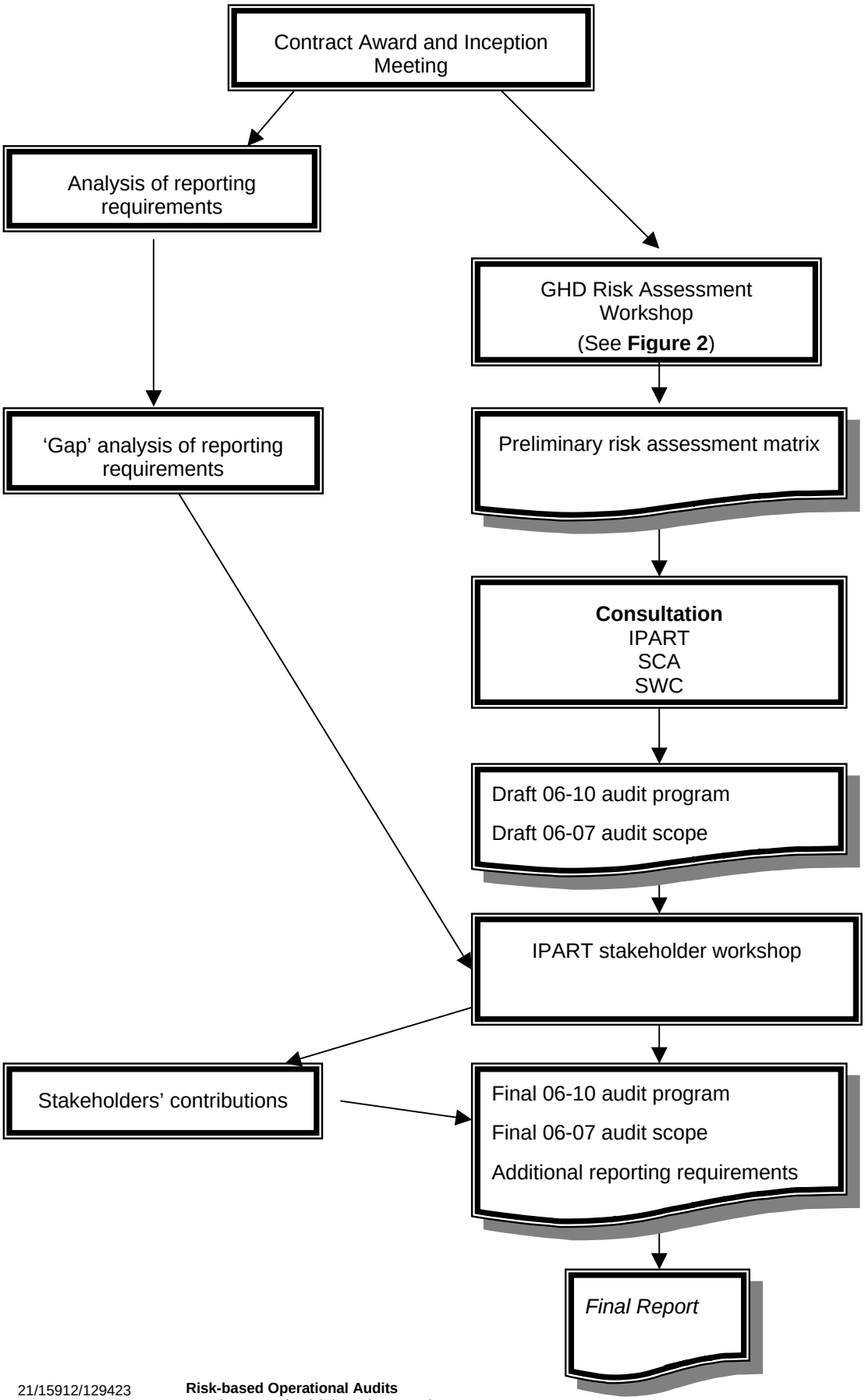
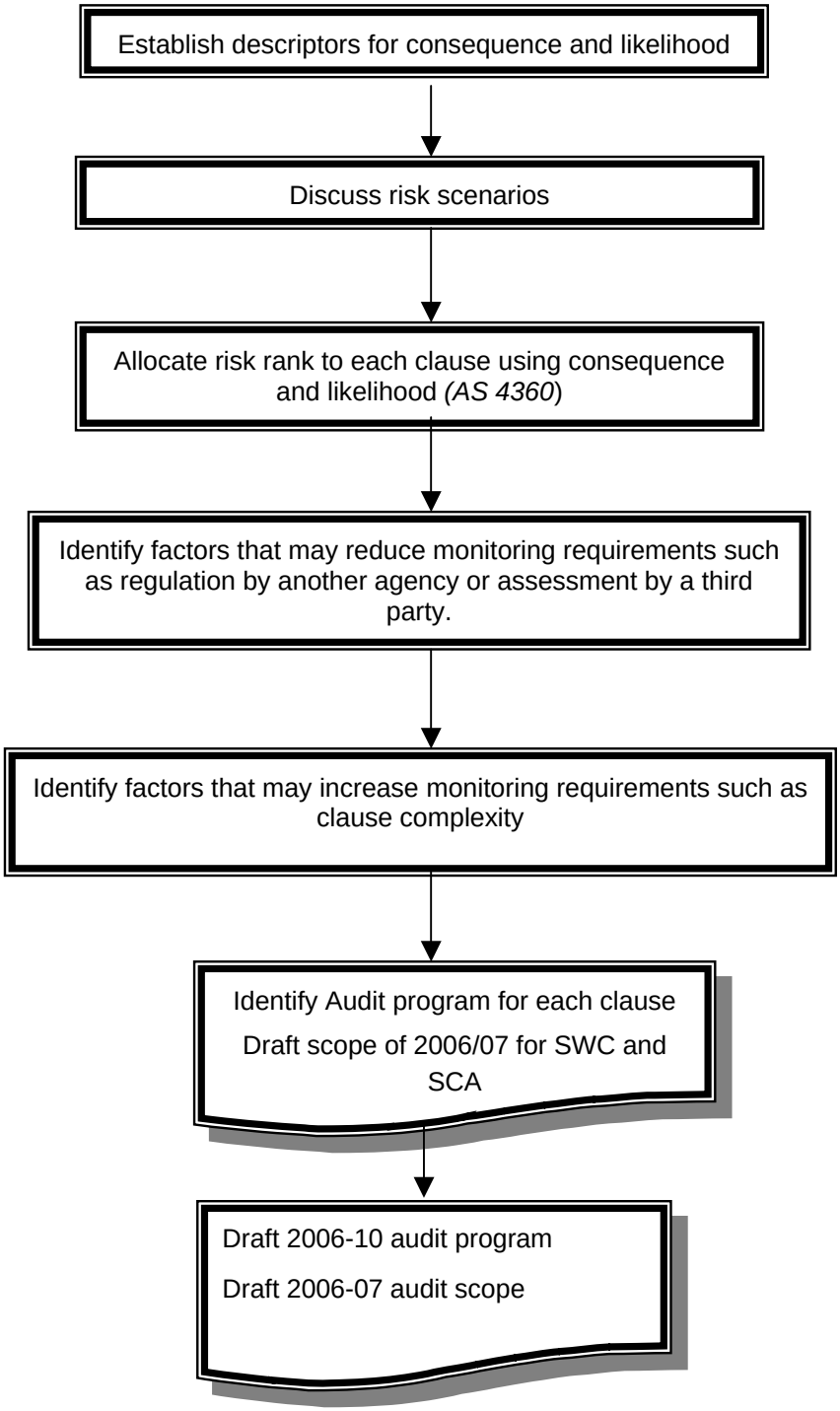


Figure 2 Key elements of the risk workshop



2.3 Draft Audit program and Audit scope

Discussions with SWC & SCA together with ongoing consultation with IPART lead to the refinement of the risk assessment process and the development of a draft 2006-10 Audit program and 2006-07 Audit scope.

The draft Audit program and scope were presented for discussion and feedback at a subsequent stakeholder's workshop.

2.4 Stakeholder workshop

A stakeholders' workshop was held on 25th June 2006, by IPART, and provided the opportunity for GHD to present the methodology and draft Audit programs.

At the workshop, IPART presented the project's objectives and GHD presented the risk-based methodology used to develop the draft Audit program and draft Audit scope for 2006/07.

Workshop participants were provided with the opportunity to comment on the methodology and findings and were invited to submit further comments following the workshop. GHD undertook to consider the comments prior to finalising its recommendations.

A list of participants and the comments made at the workshop is provided in **Appendix B**, together with a summary of how GHD has incorporated the comments in the final 2006-10 Audit program, 2006-07 Audit scope and this report.

2.5 Final Audit program and Audit scope

Discussions with IPART and feed back from Stakeholder's workshop were considered prior to the finalisation of the risk assessment process and the development of the final 2006-10 Audit program, 2006-07 Audit scope and this report.

2.6 Gap analysis of reporting requirements

In parallel to the risk assessment workshop, GHD undertook a review of the current reporting requirements for each clause of the Operating Licences and other regulatory requirements. GHD identified the records required to demonstrate compliance with each clause.

The Operating Licences require the utility to report to IPART on performance against a number of clauses by 1 September each year (referred to as the *"1 September reports").* These reports are likely to become increasingly important under a risked–based audit approach, being an existing mechanism that can be expanded to report where the obligation is not audited.

GHD undertook a tabulated gap analysis between:

- Records and reporting requirements, in accordance with the *1 September reports*; and
- Records and reporting required to determine compliance against each Licence Clause.

This analysis identified, for those clauses that are subject to desk-top review, areas where improved reporting needs to be introduced.

2.7 Presentation to IPART and stakeholders

GHD prepared a draft report for presentation to the Tribunal, covering the:

- Recommended 2006/07 Audit scope for both the SWC and the SCA;
- Findings of the Gap Analysis and the recommended additional reporting requirements to demonstrate compliance; and
- The methodology underpinning GHD's recommendations.

3. Methodology to establish the Audit program

3.1 The process

This section outlines the *step-by-step* process used by GHD to establish the risk-based 2006/10 Audit program and 2006/07 Audit scope for the SCA and SWC. The process is then documented should a risk-based approach be applied to audit regimes for the Hunter Water and the State Water Corporation, which also fall under the regulation of IPART.

The *step-by-step* process involved, for each Operating Licence clause, the following tasks:

- Undertaking a risk assessment and identifying a preliminary monitoring regime;
- Identifying the factors which may reduce the level of auditing for each clause (including factors such as the clause being regulation by another Regulator (such as, the Department of Health) or is assessed by an independent third party (such as in the case of Dam Safety));
- Identifying the factors which may increase the level of auditing required for each clause, including the technical skill required to assess performance or the complexity in interpreting the utility's performance (for example, in water quality or catchment management programs);
- Allocating a ***5-year Audit program*** for each clause (5 years representing the term of the Licence), based on the risk profile and factors influencing the level of auditing; and
- Allocating an **Audit scope*,*** for the nominated audit period, based on the program and audits completed to date. The scope of audit would be undertaken on an annual basis.

For the Operating Licence as a whole, then:

- Undertake a 'reality' check by reviewing the logic and consistency of the recommended Audit program and scope, for each clause, between the SWC and SCA Operating Licences, for similar clauses; and
- Finalise the Audit program and scope.

These steps are detailed in the following sub-sections.

3.2 Risk assessment

Australian Standard 4360:2004 Risk Assessment (the Standard) provides a generic and adaptable guide for managing risk and specifies the key elements of a risk assessment process. The risk assessment applied to this project is consistent, to the extent necessary, with the Standard.

The *Australian Drinking Water Guidelines*[6] (ADWG) recognises the Standard as an appropriate framework for analysis and management of risks associated with water provision from catchment to consumer. Indeed, SWC also applies a risk management tool consistent with the Standard.

The purpose of this risk assessment is to assist IPART make a *determination on the level of compliance monitoring* required in order to gain adequate confidence in the performance being reported by the utilities, whilst seeking opportunities to minimise the regulatory burden on the utilities. It is recognised by IPART that non-compliance with Operating Licence clauses can present varying levels of risk and therefore risk should be one factor considered to determine the future Audit scopes.

The Standard recognises that the risk assessment can be undertaken to varying degrees of detail depending on the risk, the purpose of the analysis, and the information, data and resources available. As the objective of this assessment was one of determining the level of auditing, a qualitative analysis was undertaken. This involved a workshop of the audit specialists, who have been directly involved in the audit of these utilities since 2000, in assessing the risk of each clause (by applying the Standard) and supported by the findings of previous 5 to 6 years of audits.

The Standard defines risk as the chance of something happening that will have an impact on "*objectives*" and states that risk should be analysed by combining event *consequences* and their *likelihood*. This approach has been adopted for the purpose of this assessment.

Where the "*objective*" relates to compliance with a clause:

- *Consequence* has been defined as impact of non-compliance with the clause OR impact of the failure of a *control* applied to ensure compliance; and
- *Likelihood* has been defined as probability of an impact or a control failure occurring.

In order to evaluate the level of risk, presented by each clause, the following descriptors of *consequence* and *likelihood* were adopted. These are consistent with the descriptors used by SWC in its own internal risk assessment processes.

[6] NHMRC Drinking Water Guidelines 2004, Chapter 3.

3.2.1 Consequence

The descriptors for the consequence of non-compliance or control failure are listed below.

Consequence of non-compliance with the clause

(1) Insignificant	Very low impact with unimportant consequences.
(2) Minor	Minor impact with some consequences.
(3) Moderate	Noticeable impacts with clearly visible consequences.
(4) Severe	Material impact with major consequences.
(5) Catastrophic	Very high impact with catastrophic consequences.

In determining the impact of non-compliance (or control failure) with a clause, the GHD specialist/auditors discussed and considered the potential impacts on receptors including:

- *Community*: Public health, interruptions to water supply, standards of service, confidence in the safety of drinking water and customer rights;
- *Environment*: Environmental impacts and sustainability; and
- *Government*: Loss of community confidence in the water utilities and the political impact.

3.2.2 Likelihood

The compliance record of the agencies against each of the Operating Licence clause is predominantly *high* to *full compliance*. Hence if *likelihood* was based purely on the level of historic compliance, *likelihood* of non-compliance for the majority of all clauses would be recorded as *very unlikely*. In order to provide better differentiation for the purpose of the risk assessment, GHD considered the *likelihood* of control failure, where the control relates to a mechanism applied by the utility to maintain compliance.

The descriptors for the *likelihood* of non-compliance or control failure are listed below.

Likelihood of control failure

(1) Very unlikely	Control failure unlikely to occur within an audit period.
(2) Unlikely	Control failure might occur.
(3) Likely	Control failure will probably occur within an audit period.
(4) Very likely	Strong probability of multiple control failures to occur within an audit period.

3.2.3 Risk matrix

The level of risk each clause presents is determined using the risk matrix which, itself, is a function of *consequence* and *likelihood*.

The ADWG recognises that there are critical control points in the water supply system where multiple barriers are required to prevent, to acceptable level, catastrophic impacts from occurring.

Example of multiple barriers to manage critical control points

The utilities minimise the potential contamination of potable water by applying a number of barriers including:

- Catchment management and source water protection;
- Detention in protected reservoirs;
- Management of Extraction;
- Water treatment and disinfection; and
- Protection and maintenance of the distribution system.

IPART has the capacity to contribute to these barriers by ensuring that all critical control points are afforded a high degree of control regardless of likelihood of failure. To this end, GHD has skewed the risk matrix to reflect those clauses with a *consequence* rating of *Catastrophic* are considered HIGH risk regardless of *likelihood*.

Subsequently, the level of risk for each clause was determined as follows:

Level of risk matrix

	Likelihood			
Consequence	(1) Very unlikely	(2) Unlikely	(3) Likely	(4) Very likely
(1) Insignificant	LOW	LOW	LOW	MODERATE
(2) Minor	LOW	LOW	MODERATE	MODERATE
(3) Moderate	MODERATE	MODERATE	MODERATE	HIGH
(4) Severe	MODERATE	HIGH	HIGH	HIGH
(5) Catastrophic	HIGH	HIGH	HIGH	HIGH

In applying these conservative ADWG drivers to the risk matrix, GHD considered the impact it may have on other Licence requirements such as environment and customer management. It is noted that with the exception of clauses related to potable water or system performance, the Licence clauses for both SWC and SCA did not record consequence levels above *moderate* and consequently were ranked *low to moderate risk.*

Whilst the above risk matrix is consistent, in principle, with that applied by SWC, it deviates in the following areas.

- The SWC matrix provides four levels of risk whereas the matrix for this assessment provides three levels of risk (HIGH, MEDIUM and LOW). Three levels of risk are considered appropriate for the qualitative assessment undertaken and adequate for the purposes for this project.
- The SWC matrix evenly distributes the risk levels from VERY HIGH to VERY LOW whereas the matrix for this assessment has been skewed towards HIGH. This is consistent with the ADWG and reflects an inherent conservatism in the management of risk associated with potable water.

3.3 Factors which may affect the Audit program

Despite the level of risk that may be presented by non-compliance with a particular clause of the Licence, the level of auditing required for that clause may be adjusted due to the following factors.

Examples of how these factors are applied are presented in Section 3.5 of this report.

Table 1 Factors that may REDUCE the level of auditing

Classification	Descriptor	Consideration
Regulated by others	Another regulator has prime responsibility over monitoring the utility's compliance with the requirement(s) of this clause.	Is it in the public interest to continue to report compliance with this requirement through IPART?
Independent verification	A body has independently verified the data, process or information used by the utility to demonstrate compliance with this clause.	Does this provide greater confidence on the quality of the data and therefore reduce compliance risk?

Table 2 Factors that may INCREASE the level of auditing

Classification	Descriptor	Consideration
Complexity	Processes and procedures used to collate data to demonstrate compliance with this clause cannot be fully assessed within an audit interview.	Is independent verification required?
Interpretation/Analysis Required	Compliance with this clause requires a degree of interpretation or analysis that is not ideally assessed by a desk-top review. OR The interpretation aspect of the clause requires clarification to ensure it can be assessed by a desk-top review.	Is an Interview required as a minimum? OR Can IPART and the agency establish an agreed interpretation and reporting requirements prior to the desk-top assessment?

Auditing program

As previously discussed, the purpose of this risk assessment is to assist IPART make a *determination on the level of compliance monitoring* required in order to gain adequate confidence in the performance being reported by the utilities, whilst seeking opportunities to minimise the regulatory burden on the utilities.

The level of auditing of a particular clause can be varied to attain a desired level of confidence by:

- The level (or depth) of the assessment; and
- The frequency of the auditing.

These variables are described below.

3.4.1 Level of Assessment

The proposal presented at the stakeholder workshop by GHD outlined three levels of assessment:

- *Desk-top review* involving an assessment of compliance with a clause based on information provided by the agency only;
- *Audit interviews* involving an assessment of compliance with a clause based on information provided by the agency, audit interviews and other assessments deemed necessary; and
- *Detailed assessment* involving assessment of compliance with a clause based on information provided by the agency, audit interviews and assessments in greater detail on systems or models supporting the data provided by the utilities.

These levels of audit reflect the audit types currently used in the annual audit regime. However using a risk-based approach, a significant number of the clauses would fall under the desk-top review level.

The utilities argued that there was limited reduction in the regulatory burden under this model. GHD in consultation with IPART considered the utilities' position and developed the following revised model with only two levels of assessment.

The revised levels of the assessment identified for this program are defined in Table 3.

Table 3 Levels of the Assessment

Desk-top review	For all clauses excluded from the Audit scope, the utility must prepare an *Operating Licence Statement of Compliance* (OLSC). The OLSC must state the overall level of compliance with each clause. For clauses that are covered by reporting requirements (such as the September 1 Reports), the Utility must fulfil those reporting requirements and refer to the reports, to support the statement of compliance it has made in the OLSC. For clauses that are not covered by annual reporting requirements, the OLSC must include an outline of compliance with the key elements of each clause and supplementary reporting, where specified. No evidence is required to be presented with the OLSC. The CEO must sign the OLSC. IPART will conduct a desk-top review of the OLSC and, at its discretion, may request evidence or an interview to assess compliance with any clause in more detail.
Audit interview	For all clauses *included* in the Audit scope: IPART, or its delegated representative, will conduct audit interviews. The auditor shall, in preparation for the audit interview, provide questionnaires to the utility with an outline of audit questions and the evidence required. The utility must prepare for the audit interviews and where possible, provide the auditor with the required evidence prior to the interviews. The auditor may seek additional audit evidence at the interviews and/or subsequent interviews. The auditor must identify to IPART any uncertainties in its assessment that may warrant further investigation to assess compliance to an acceptable level. For example: a detailed assessment of a hydrological model that provided the data, which the utility relied upon to demonstrate compliance.

3.4.2 The frequency of auditing

The frequency of auditing required of each clause will be broadly commensurate with the level of risk allocated. Three frequency levels of auditing, over the five year period, have been established to address the three levels of risk, vis:

- Level 1, entails one 'Audit Interview' and four Desk top audits;
- Level 2, entails two Audit Interview' and three Desk top audits, and
- Level 3, entails five Audit Interview's.

In addition, factors that may affect the monitoring regime may elevate or reduce audit level as presented in the matrix below. This matrix was used, as a guide, to allocate an Audit program for each clause, given its calculated risk and other factors affecting the monitoring regime.

	Level 1 Audit Program	Level 2 Audit Program	Level 3 Audit Program
Desk-top	4	3	NIL
Audit interview	1	2	5

Interpretation/Analysis →

← Regulator/ Independent Verifier

Note: Blue shadings refer to the level of risk (refer to the risk matrix in Section 3.2.3)

Two examples of how the Audit program was developed using the above table is presented below.

Example 1 – SWC Licence Clause 3.3 (Drinking Water Quality Reporting)

The risk of Clause 3.3 was analysed to be "HIGH", as *consequence and likelihood* were assessed as 4 and 2, respectively. A "HIGH" risk would ordinarily require a "Level 3 Audit program" (refer to shading in boxes) however the requirements of the clause are also regulated by the NSW Department of Health hence the Audit program has been reduced to a "Level 2 Audit program" (follow the yellow arrow).

Example 2 - SWC Licence Clause 4.5 (Reporting System Performance Standards)

The risk of Clause 4.5 was analysed to be "Moderate", as *consequence and likelihood* were assessed as 3 and 3, respectively. A "Moderate" risk would ordinarily require a "Level 2 Audit program" (refer to shading in boxes) however the requirements of the clause are considered complex and require significant interpretation and analysis hence the Audit program has been upgraded to a "Level 3 Audit program" (follow the red arrow).

3.5 Scope of next audit period (Terms of Reference)

Once the Audit program for each individual clause was established, the following factors were considered to determine the scope for the next audit period:

- Level of assessments previously undertaken on each clause and how they correlate to the Audit Program;
- Compliance of the utilities with the requirements of the clause in the previous audit; and
- Compliance history with equivalent clauses (if any) from previous Licence periods.

3.6 Rationalise the Audit program and Audit scope

Following the allocation of an Audit program and scope to each clause, rationalisation is required to ensure that:

- Logical grouping of clauses are being audited in a consistent manner; and
- Clauses similar in nature across the Licence (and also across Licences of both SWC and SCA) are being audited in a consistent manner.

The output of the rationalisation is the recommended 5 year Audit program and annual Audit scope for IPART to consider in preparing its scope of audit on an annual basis.

3.7 Annual Audit scope adjustment

As outlined earlier, the overall scope of this project was seeking to apply a risk-based approach to auditing without impacting on the confidence that the community has in IPART fulfilling its audit role and the utilities complying with their respective Operating Licences.

Thus, not withstanding the risk based approach, IPART will need to reserve the right to apply a full, or in some cases, an intensified audit through assigning '*Ministerial Requirements'* from year to year.

Factors that influence such annual adjustments, include:

- Lower levels of performance of the utilities over previous audit periods;
- Additional requirements set through *Ministerial Requirements*, and
- Periodic and or more detailed, audits necessary to assess systemic changes or longer terms performance targets.

4. Audit program and scope

4.1 Proposed Audit program and scope

The Audit program and scope for the SWC and SCA Operating Licences are presented in the following tables. The shading depicts the proposed Audit program for each clause as follows:

	Level 1 Audit Program	Level 2 Audit Program	Level 3 Audit Program
Desk-top review frequency in Licence period	**4**	**3**	**NIL**
Audit Interview frequency in Licence period	**1**	**2**	**5**

In the *5-year audit program* column, if a clause is identified as dark blue, then a Level 3 Audit program is proposed which will require *audit interviews* to be undertaken each year for the term of the Licence. Likewise, if a clause is identified as light blue, then a Level 1 Audit program is proposed which requires 1 *audit interview* and 4 *desktop reviews* to be undertaken over the term of the Licence.

In the *2006/07 audit scope* column, if a clause is highlighted in green, then that clause in included in the 2006/07 audit scope and an audit interview is recommended. For all clauses *excluded* from the Audit scope for the 2006/07 period, a desk-top review is required.

The scope of *desktop reviews* and *audit interviews* are presented in Table 3.

The Audit program and 2006/07 Audit scope of SWC and SCA are presented in **Tables 4 and 5,** respectively. Detailed matrices including risk assessment for each clause are presented in **Appendix C.**

Table 4 Audit program and 2006/07 Audit scope for SWC

2006-10 SWC Operating Licence		5-year Audit Program	2006/07 audit scope
3	*WATER QUALITY*		
3.1	Drinking Water Quality - Standards	5 audits	Audit
3.2	Drinking Water Quality – Monitoring	2 audits, 3 desktops	Desktop
3.3	Drinking Water Quality - Reporting	5 audits	Audit
3.4	Drinking Water – Planning	5 audits	Audit
3.5	Drinking Water - Incident Management	2 audits, 3 desktops	Desktop
3.6	Other Grades of Water	5 audits	Audit
4	*INFRASTRUCTURE PERFORMANCE*		
4.4	Compliance with Performance Standards	5 audits	Audit
4.5	Reporting on system performance standards	2 audits, 3 desktops	Desktop
4.6	Review of system performance standards	1 audit, 4 desktops	Desk-top
4.7	Service quality and system performance indicators	2 audits, 3 desktops	Desk-top
4.8	Asset Management Obligation	Audit once during term of licence	Desk-top
4.9	Reporting on Asset Management System	Audit once during term of licence	Desk-top
4.10	Auditing the Asset Management System	No requirement	NR
4.11	Water Leakage	2 audits, 3 desktops	Audit (Clause 4.11.2 only)
4.12	Reports Related to Water Leakage	2 audits, 3 desktops	Audit (Clause 4.12.1 only)
4.13	Response time for water mains breaks	5 audits	Audit
4.14	Priority Sewerage	2 audits, 3 desktops	Desktop
5	*CUSTOMER AND CONSUMER RIGHTS*		
5.1	Customer contract	1 audit, 4 desktops	Desktop
5.2	Consumers	1 audit, 4 desktops	Desktop
5.3	Code of Practice and Procedure on Debt and Disconnection	1 audit, 4 desktops	Desktop

2006-10 SWC Operating Licence		5-year Audit Program	2006/07 audit scope
5.4	Customer Councils	1 audit, 4 desktops	Desktop
5.5	Customer Service Indicators	2 audits, 3 desktops	Desktop
6	*COMPLAINTS AND DISPUTE HANDLING*		
6.1	Internal Dispute Resolution Process	2 audits, 3 desktops	Desktop
6.2	External Dispute Resolution Scheme	1 audit, 4 desktops	Desktop
6.3	Complaints to other bodies	1 audit, 4 desktops	Desktop
7	*ENVIRONMENT – INDICATORS AND MANAGEMENT*		
7.1	Environmental Indicators	2 audits, 3 desktops	Desktop
7.2	Environmental Management	1 audit, 4 desktops	Desktop
7.3	Potable Water Use	1 audit, 4 desktops	Desktop
7.4	Metering of Individual Units	Audit 06/07 only	Audit
9	*WATER CONSERVATION AND DEMAND MANAGEMENT*		
9.1	Water Conservation Target	2 audits, 3 desktops	Desktop
9.2	Demand Management Strategy	5 audits	Audit
9.3	Reducing Discharges	2 audits, 3 desktops	Desktop
9.4	Water Conservation Rating and Labelling	1 audit, 4 desktops	Desktop
12	*OPERATIONAL AUDITS OF THIS LICENCE*		
12.2.1(b)	Sydney Water's implementation of any MOU.	2 audits, 3 desktops	Desktop

Table 5 Audit program and 2006/07 Audit scope for SCA

2006-10 SCA Operating Licence		5 year audit program	2006/07 audit scope
3	*BULK RAW WATER QUALITY*		
3.1	Specific Water Characteristics	1 audit, 4 desktops	Audit
3.2	Health-Related Water Quality Characteristics	1 audit, 4 desktops	Audit
3.4	Water Supplied for Water Treatment	5 audits	Audit
3.5	Catchment and System Management	5 audits	Audit
3.6	Water quality monitoring and reporting	2 audits, 3 desktops	Audit
3.7	Water Quality Planning - Water Quality Management Framework	1 audit, 4 desktops	Audit
3.8	Environmental water quality	2 audits, 3 desktops	Audit
4	*CATCHMENT MANAGEMENT AND PROTECTION*		
4.1	SCA to Manage and Protect Catchemnt Areas	5 audits	Audit
4.2	Plans of Management - Special Areas	5 audits	Audit
4.3	Regional Environmental Plan	2 audits, 3 desktops	Audit
4.4	State Environmental Planning Policy	2 audits, 3 desktops	Audit
4.5	Provision of Information	1 audit, 4 desktops	Desktop
5	*THE ENVIRONMENT*		
5.1	Environment Plan	1 audit, 4 desktops	Audit
5.2	Catchment and Environmental Performance Indicators	1 audit, 4 desktops	Audit
6	*MANAGEMENT OF CATCHMENT INFRASTRUCTURE WORKS AND WATER CONSERVATION*		
6.1	Management of Catchment Infrastructure	5 audits	Audit
6.2	Management of Catchment Infrastructure Works	2 audits, 3 desktops	Audit
6.3	Review of the Model	Audit once during term of licence	Desktop
6.4	Water Conservation	2 audits, 3 desktops	Desktop

2006-10 SCA Operating Licence		5 year audit program	2006/07 audit scope
7	*ASSESSMENT MANAGEMENT*		
7.1	Assessment Management Obligation	Audit to correspond with price review of 2008	Desktop
7.2	Reporting on the Management System of the Assets	Audit to correspond with price review of 2008	Desktop
7.3	Auditing the Management System of the Assets	Audit to correspond with price review of 2008	Desktop
8	*CUSTOMERS*		
8.1	Customer - Sydney Water Corporation	2 audits, 3 desktops	Desktop
8.2	Customers - Other than Sydney Water Corporation	2 audits, 3 desktops	Desktop
8.3	Complaints	1 audit, 4 desktops	Desktop
8.4	Consultation	1 audit, 4 desktops	Desktop
11	*ANNUAL AUDIT OF THE LICENCE*		
11.2.1(b)	the SCA's compliance with its obligations under each Memorandum of Understanding referred to in clause 2.3;	1 audit, 4 desktops	Desktop

5. Utility reporting for desk-top audits

5.1 Reporting gap analysis

The purpose of the reporting gap analysis for this study is to identify the extent to which the annual reporting requirements embedded in the Licences (such as the September 1 reports), report on the utility's compliance with the Licence clauses.

The gap analysis identified that the Licences require the utilities to report or provide information related to annual compliance against "performance" clauses such as:

- Water quality standards;
- System performance standards and other indicators (SWC only);
- Catchment management activities (SCA only)
- Implementation of management plans or strategies; and
- Customer service and environmental indicators.

Therefore, for the clauses that require compliance with these performance clauses, the annual reporting requirements provide a good coverage.

There is another category of clauses however, for which the annual reporting requirements do not fully report compliance. These relate to the more "mechanical" clauses such as:

- The *establishment*[7] of Customer Councils (Clause 5.4 o the SWC operating Licence); or
- The *preparation*[8] of a draft five-year Environment Plan (Clause 5.1 of the SCA operating Licence).

In order for IPART to assess compliance with both examples presented above, and other similar clauses not explicitly covered by the annual reporting requirements, the utilities need to provide a statement of compliance and outline compliance with the key elements of each clause.

5.2 Reporting requirements for the utilities

It is recommended that:

- For all clauses excluded from the Audit scope, the utility must prepare an *Operating Licence Statement of Compliance* (OLSC). The OLSC must state the overall level of compliance with each clause.

[7] It is recognised that SWC must report to IPART on "*the issues considered and the achievement of the customer Councils*", but no reporting is required related to the establishment of the Customer Councils.

[8] It is recognised that SCA must report to IPART on "*progress in meeting the Environment Plan* ", but no reporting is required related to the preparation of the Environment Plan.

- For clauses that are covered by reporting requirements (such as the September 1 Reports), the Utility must fulfil those reporting requirements and refer to the reports, to support the statement of compliance it has made in the OLSC.
- For clauses that are not covered by annual reporting requirements, the OLSC must include an outline of compliance with the key elements of each clause. The utility must also provide supplementary reporting, where outlined in **Tables 6 and 7** of this report.
- No evidence is required to be presented with the OLSC.
- The CEO must sign the OLSC.

IPART will conduct a desk-top review of the OLSC and, at its discretion, may request evidence or an interview to assess compliance with any clause in more detail.

Tables 6 and 7 identify those clauses (at the sub-clause level) that have corresponding annual reporting requirements. The tables also outline the recommended levels of reporting for each sub-clause.

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Table 6 Desk-top audit requirements for SWC

2006-10 SWC Operating Licence		Licence Reporting Requirements	Desk-top reporting over and above reporting requirements of the Licence
3	*WATER QUALITY*		
3.1	Drinking Water Quality - Standards	Report to Health in accordance with Clause 3.3.2.	Not applicable. No desk-top audits programmed.
3.2	Drinking Water Quality – Monitoring	Report to Health in accordance with Clause 3.3.1	Statement of compliance. Refer to reports.
3.3	Drinking Water Quality - Reporting	Reporting Clause	Not applicable. No desk-top audits programmed.
3.4	Drinking Water – Planning	Prepare plan for Health; Reporting to Heath annually	Not applicable. No desk-top audits programmed.
3.5	Drinking Water - Incident Management	Report incidents to Health in accordance with Clause 3.5.1	Statement of compliance. Refer to reports.
3.6	Other Grades of Water	Nil	Not applicable. No desk-top audits programmed.
4	*INFRASTRUCTURE PERFORMANCE*		
4.4	Compliance with Performance Standards	Report in accordance with Clause 4.5	Not applicable. No desk-top audits programmed.
4.5	Reporting on system performance standards	Reporting Clause	Statement of compliance. Refer to reports.
4.6	Review of system performance standards	Report to the Minister in accordance with Clause 4.6.1	Statement of compliance. Refer to reports.
4.7	Service quality and system performance indicators	Report in accordance with Clause 4.7.3	Statement of compliance. Refer to reports.
4.8	Asset Management Obligation	Report in accordance with Clause 4.9	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
4.9	Reporting on Asset Management System	Report in accordance with Clause 4.9	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
4.10	Auditing the Asset Management System	NR	Not applicable. No desk-top audits programmed.
4.11	Water Leakage	Report in accordance with Clause 4.11.3	Statement of compliance. Refer to reports.
4.12	Reports Related to Water Leakage	Report in accordance with Clause 4.12	Statement of compliance. Refer to reports.
4.13	Response time for water mains breaks	Report in accordance with Clause 4.13.3	Not applicable. No desk-top audits programmed.
4.14	Priority Sewerage	Report in accordance with Clause 4.14.3	Statement of compliance. Refer to reports.
5	*CUSTOMER AND CONSUMER RIGHTS*		
5.1	Customer contract	Nil	Statement of Compliance. Report on changes since the previous audit
5.2	Consumers	Nil	Statement of Compliance. Report on changes since the previous audit
5.3	Code of Practice and Procedure on Debt and	Nil	Statement of Compliance. Report on changes since the

2006-10 SWC Operating Licence		Licence Reporting Requirements	Desk-top reporting over and above reporting requirements of the Licence
	Disconnection		previous audit
5.4	Customer Councils	Nil	Statement of Compliance. Report on changes since the previous audit
5.5	Customer Service Indicators	Report in accordance with Clause 5.5.2	Statement of compliance. Refer to reports.
6	*COMPLAINTS AND DISPUTE HANDLING*		
6.1	Internal Dispute Resolution Process	Nil	Statement of Compliance. Report on changes since the previous audit
6.2	External Dispute Resolution Scheme	Nil	Statement of Compliance. Report on changes since the previous audit
6.3	Complaints to other bodies	Report in accordance with Clause 6.3.1 and 6.3.2	Statement of compliance. Refer to reports.
7	*ENVIRONMENT – INDICATORS AND MANAGEMENT*		
7.1	Environmental Indicators	Report in accordance with Clause 7.1.2	Statement of compliance. Refer to reports.
7.2	Environmental Management	Only partly addressed by Clause 7.2.6	Statement of compliance. Refer to reports. Address key elements of each clause not cnvered by the report.
7.3	Potable Water Use	Report in accordance with Clause 7.3.4	Statement of compliance. Refer to reports.
7.4	Metering of Individual Units	Report to the Minister in accordance with Clause 7.4.1 (b)	Statement of compliance. Refer to reports.
9	*WATER CONSERVATION AND DEMAND MANAGEMENT*		
9.1	Water Conservation Target	Report in accordance with Clause 9.1.3	Statement of compliance. Refer to reports.
9.2	Demand Management Strategy	Report in accordance with Clause 9.2.2.	Not applicable. No desk-top audits programmed.
9.3	Reducing Discharges	Only partly addressed by Clause 9.3.3	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
9.4	Water Conservation Rating and Labelling	Report in accordance with Clause 9.4.2	Statement of compliance. Refer to reports.
12	*OPERATIONAL AUDITS OF THIS LICENCE*		
12.2.1(b)	Sydney Water's implementation of any MOU.	Nil	Letters from the agencies confirming implementation of the MOU.

Table 7 Desk-top audit requirements for SCA

2006-10 SCA Operating Licence		Licence Reporting Requirements	Desk-top reporting over and above reporting requirements of the Licence
3	*BULK RAW WATER QUALITY*		
3.1	Specific Water Characteristics	Report in accordance with Clause 3.1.3 and 3.6	Statement of compliance. Refer to reports.
3.2	Health-Related Water Quality Characteristics	Report in accordance with Clause 3.2.3 and 3.6	Statement of compliance. Refer to reports.
3.4	Water Supplied for Water Treatment	Report to Health in accordance with Clause 3.6	Not applicable. No desk-top audits programmed.
3.5	Catchment and System Management	NIL	Not applicable. No desk-top audits programmed.
3.6	Water quality monitoring and reporting	Report to IPART in accordance with Clause 3.6.7and 3.6.10	Statement of compliance. Refer to reports.
3.7	Water Quality Planning - Water Quality Management Framework	Only partly addressed by Clause 3.7.3(g)	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
3.8	Environmental water quality	Nil	Report requirements from nominated agencies, programs SCA has in place to ensure compliance and how SCA has complied with these requirements.
4	*CATCHMENT MANAGEMENT AND PROTECTION*		
4.1	SCA to Manage and Protect Catchemnt Areas	Report in accordance with Clause 4.1.2	Not applicable. No desk-top audits programmed.
4.2	Plans of Management - Special Areas	Report in accordance with Clause 4.1.2	Not applicable. No desk-top audits programmed.
4.3	Regional Environmental Plan	Only partly addressed by Clause 4.3.3.	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
4.4	State Environmental Planning Policy	Nil	Statement of compliance. Address key elements of each clause.
4.5	Provision of Information	Nil	Statement of compliance. Address key elements of each clause.
5	*THE ENVIRONMENT*		
5.1	Environment Plan	Report in accordance with Clause 4.3.3	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.

2006-10 SCA Operating Licence		Licence Reporting Requirements	Desk-top reporting over and above reporting requirements of the Licence
5.2	Catchment and Environmental Performance Indicators	Report in accordance with Clause 4.3.3	Statement of compliance. Refer to reports.
6	*MANAGEMENT OF CATCHMENT INFRASTRUCTURE WORKS AND WATER CONSERVATION*		
6.1	Management of Catchment Infrastructure	Nil	Not applicable. No desk-top audits programmed.
6.2	Management of Catchment Infrastructure Works	Nil	Not applicable. No desk-top audits programmed.
6.3	Review of the Model	Report in accordance with Clause 6.3.4	Statement of compliance. Refer to report as applicable.
6.4	Water Conservation	Report in accordance with Clause 6.4.2	Statement of compliance. Refer to report as applicable.
7	*ASSESSMENT MANAGEMENT*		
7.1	Assessment Management Obligation	Nil	Not applicable. No desk-top audits programmed.
7.2	Reporting on the Management System of the Assets	Report in accordance with Clause 7.2.1	Statement of compliance. Refer to report as applicable.
7.3	Auditing the Management System of the Assets	Report in accordance with Clause 7.3.1	Statement of compliance. Refer to report as applicable.
8	*CUSTOMERS*		
8.1	Customer - Sydney Water Corporation	Nil	Statement of compliance. Report change since previous year.
8.2	Customers - Other than Sydney Water Corporation	Nil	Statement of compliance. Report change since previous year.
8.3	Complaints	Only partly addressed by clause 8.3.5.	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
8.4	Consultation	Only partly addressed by clause 8.4.2.	Statement of compliance. Refer to reports. Address key elements of each clause not covered by the report.
11	*ANNUAL AUDIT OF THE LICENCE*		
11.2.1(b)	the SCA's compliance with its obligations under each Memorandum of Understanding referred to in clause 2.3;	Nil	Letters from the agencies confirming implementation of the MOU.

Appendix A

GHD workshop participants

Table A GHD Workshop participants

Licence Part	Name	Summary of experience with IPART Operational Audits
Dr Peter Nadebaum	Water Quality	Lead auditor for SCA (99 to 05). Lead auditor for SWC (2000 to 2006).
Mr Tom Carpenter	System Performance	Lead auditor for SWC (2003 to 2006). Lead auditor for HWC (2006). NWI audits or SWC and HWC (2006).
Mr Maurice Pignatelli	Water Conservation and Demand Management	Audit Manager for all IPART audits since 1999. Lead/support auditor for SWC (20000 to 2004).
	Security of Supply	Lead/support auditor for SCA (1999 to 2004).
	Customers	Lead auditor for HWC (2006).
	Environment	Lead auditor for SCA audits and support auditor for SWC audit.
Dr Ian Garrard	Catchment Management	Audit Director for all IPART audits since 1999. Lead auditor for SCA 1999 to 2005)
	MOU	Lead auditor for SWC (2000 to 2006).

Appendix B

Stakeholder’s Comments

Summary of Discussion: Risk Based Audit Workshop

Sydney Water Corporation and Sydney Catchment Authority
25 June 2007

Attendees:

IPART Tribunal Member	Mr James Cox
IPART Secretariat	Mr Colin Reid
	Mr Michael Seery
	Ms Felicity Hall
	Mr Greg Dodd
Department of Environment & Climate Change	Peter Marczan
Department of Water and Energy	Hans Wesseling
Energy and Water Ombudsman NSW	Chris Dodds
	Linda Brown
Hunter Water Corporation	Anne Fullick
NSW Health	Dr Paul Byleveld
PIAC	Hugh O'Neil
Sydney Catchment Authority	Simone Greenaway
	Michelle McIlvenny
Sydney Water Corporation	Greg Reynolds
	Peter Nedelkovski
Total Environment Centre	Leigh Martin
GHD	Dr Ian Garrard
	Maurice Pignatelli

Overview

There was general acceptance of the direction of a risk-based approach for the Operating Licence audits for Sydney Water Corporation and Sydney Catchment Authority. However there needs to be a review of the detail of applying the proposed risk based methodology.

The definition of the audit types - desktop, audit interview and detailed assessment - need to be reviewed. There should be an explanation of how these categories relate to the current audit.

Comments from Stakeholders

Sydney Water Corporation

A risk based audit should focus resources on areas of highest need

The principle of audit holidays need to be included in a risk based approach

Concern that the process has added subjectivity rather than objectivity

Fine tuning of the process is needed

Consider the context of the audit approach across the 5 year Licence period in terms of scheduling risk based audits and detailed assessments

Question the consistency of application of the methodology between similar SCA and SWC clauses

<u>Comments on application of methodology</u>:

– consider links to other clauses, the structure of clauses, and the different nature of the requirements

Sydney Catchment Authority

Important to get the detail right in terms of applying the risk based audit methodology. The application of the logic has to be clear

Emphasis on the consequences table (if risk is assessed as high or low)

There needs to be clear links to the risk ranking eg. What is the impact of other regulators on the ranking?

There needs to be clear definitions on the audit types – desktop, audit interview and detailed assessment

GHD needs to explain how the current audit fits in the proposed audit categories eg. the current audit has both audit interview and detailed assessment

Comments on application of methodology:

- consider how exception reporting could be used
- not clear why clause 6.4 is a dark blue rating when SCA has limited scope for water conservation
- need to ensure the ratings for sub clauses (a) (b) are consistent with the higher level obligation.

Hunter Water Corporation

Input from the agencies is important in applying a risk based methodology

The methodology will need to be applied each year

Need to ensure that the process of applying the methodology is not burdensome, that is extra regulation for the agencies

Important to define the type of audits – desktop, audit interview, and detailed assessment.

NSW Health

NSW Health is comfortable with a risk based audit approach for the Operating Licences

Need to have mechanisms to track reporting if an obligation is not audited

Consider how to use verification as part of the risk based approach eg. NSW Health could write a letter to IPART on the MoUs rather than providing minutes from the meetings

Department of Water and Energy

Supportive of a risk based approach to audits of the Operating Licences

The methodology appears to be an efficient way of managing risk

Department of Environment and Climate Change

The outcomes from applying a methodology are important

Important that the process doesn't become a "black box" where numbers are entered and results pop out

Need to explain how complaints would be included in the framework

Concern about overlap with the Metropolitan Water Plan

Public Interest Advocacy Centre

Question where would the costs be reduced from a risk based audit? (IPART, agency or both?)

Need to ensure that an efficient system is established to deliver the risk based audits

Transparency of the audit reporting is critical

Energy and Water Ombudsman NSW

Need to maintain compliance with requirements in the Licence regardless of whether they are audited or not

Risk based audits probably wont save much money

Customer indicators still need to be reported/published

Total Environment Centre

Risk based audit methodology seems a sensible way to proceed. Satisfied that the methodology includes two factors: risk of failure and history of compliance

On the issues of regulatory burden, TEC was surprised by the agencies comments.

Table B1: GHD Response to workshop participant's comments

Response from stakeholders	GHD Response and action
Overview There was general acceptance of the direction of a risk-based approach for the Operating Licence audits for Sydney Water Corporation and Sydney Catchment Authority. However there needs to be a review of the detail of applying the proposed risk based methodology. The definition of the audit types - desktop, audit interview and detailed assessment - need to be reviewed. There should be an explanation of how these categories relate to the current audit.	The risk-base methodology is outlined in more detail in the GHD Report. In all risk assessments there is an element of judgement. AS4360 and the risk assessment process provide a framework for that judgement to be exercised and to do so in a transparent manner. The definition of the audit type is outlined in the GHD report. To simplify the understanding of the audit type of audit. The "detailed assessment" audit type has been deleted. A recommendation will be made that IPART will require the auditor to identify whether detailed assessments of any parts of the Licence will be required in future audits.
Sydney Water Corporation ◗ A risk based audit should focus resources on areas of highest need ◗ The principle of audit holidays need to be included in a risk based approach ◗ Concern that the process has added subjectivity rather than objectivity ◗ Fine tuning of the process is needed ◗ Consider the context of the audit approach across the 5 year Licence period in terms of scheduling risk based audits and detailed assessments ◗ Question the consistency of application of the methodology between similar SCA and SWC clauses <u>Comments on application of methodology</u>: o consider links to other clauses, the structure of clauses, and the different nature of the requirements	◗ Agree. ◗ Audit holidays are not within the scope of what GHD was asked to assess. ◗ As discussed above, there is a degree of judgement in risk assessments. GHD is confident that in engaging the key auditors (Nadebaum / Carpenter / Garrard / Pignatelli) for these Licences, in the risk assessment process, any degree of subjectivity is based on professional judgement. In future, IPART may consider inviting the utility to contribute to the risk workshop). ◗ GHD to look at fine-tuning and that the risk and place it in context of further risk based auditing once the system is in place and utilities performance under the new system is evident. ◗ Scheduling for the full 5 years would be too prescriptive. IPART requires greater flexibility to respond to issues of the day. ◗ GHD to look at consistency between SWC and SCA like-clauses. ◗ GHD to consider links to other clauses.
Sydney Catchment Authority ◗ Important to get the detail right in terms of applying the risk based audit methodology. The application of the logic has to be clear ◗ Emphasis on the consequences table (if risk is assessed as high or low) ◗ There needs to be clear links to the risk ranking eg. What is the impact of other regulators on the ranking? ◗ There needs to be clear definitions on the audit types – desktop, audit interview and detailed assessment ◗ GHD needs to explain how the current audit fits in the proposed audit categories eg. the current audit has both audit interview and detailed assessment <u>Comments on application of methodology</u>: o consider how exception reporting could be used o not clear why clause 6.4 is a dark blue rating when SCA has limited scope for water conservation o need to ensure the ratings for sub clauses (a) (b) are consistent with the higher-level obligation.	◗ Agree ◗ Agree - consequence is the strongest driver in this risk assessment process. ◗ Worked examples will be provided in the report to demonstrate how this is applied. It cannot be provided to all clauses. ◗ Improved definitions will be provided in the report. Note *detailed assessment* audit type will be removed. As discussed above. ◗ Audit type definitions will include how the current audit fits into the audit categories. ◗ Exception reporting is not considered to be in the best interest of IPART and utilities. To be discussed in the report. ◗ GHD to review clause 6.4. ◗ GHD to consider links to other clauses.

Response from stakeholders	GHD Response and action
Hunter Water Corporation ◗ Input from the agencies is important in applying a risk based methodology ◗ The methodology will need to be applied each year ◗ Need to ensure that the process of applying the methodology is not burdensome, that is extra regulation for the agencies ◗ Important to define the type of audits – desktop, audit interview, and detailed assessment.	◗ Time did not permit this for SWC and SCA however, IPART may consider inviting the utility to contribute to the risk workshop). ◗ Risk category only needs to be applied once for the Licence period for each clause. The audit type should be applied on a year-to-year basis. ◗ Year to year audit scope could be undertaken by IPART; IPART and consultant; or IPART Consultant and Utility. ◗ Improved definitions will be provided in the report. Note *detailed assessment* audit type will be removed. As discussed above.
NSW Health ◗ NSW Health is comfortable with a risk based audit approach for the Operating Licences. ◗ Need to have mechanisms to track reporting if an obligation is not audited. ◗ Consider how to use verification as part of the risk based approach eg. NSW Health could write a letter to IPART on the MoUs rather than providing minutes from the meetings.	◗ Noted. ◗ Agree – Desk-top as a minimum. ◗ Agree – IPART could issue notice to auditor that letter from another regulator relating specifically to the clause in question would suffice to assess compliance with a specific clause.
Department of Water and Energy ◗ Supportive of a risk based approach to audits of the Operating Licences ◗ The methodology appears to be an efficient way of managing risk	◗ Noted.
Department of Environment and Climate Change ◗ The outcomes from applying a methodology are important. ◗ Important that the process doesn't become a "black box" where numbers are entered and results pop out. ◗ Need to explain how complaints would be included in the framework. ◗ Concern about overlap with the Metropolitan Water Plan	◗ Noted. ◗ Noted. Process is not an "equation", professional judgement has been applied, by the relevant and experienced GHD auditor to the judgement on the clause's risk and proposed means of managing this risk. ◗ Complaints and customer service have been assessed under the same risk-managed approach as other Operating Licence clauses. GHD have proposed that the future application of the risk-based approach be reassured based on utilities performance and any policy (eg Ministerial Requirements) shift. In either case, if IPART is not satisfied than the risked-based approach can be withdrawn until performance/policy is satisfied. ◗ Operating Licence requirements are as set out in the License itself. Any additional NSW govt Plan or Policy sets the context for the utilities performance, which is assessed within this context.
Energy and Water Ombudsman NSW ◗ Need to maintain compliance with requirements in the Licence regardless of whether they are audited or not ◗ Risk based audits probably wont save much money ◗ Customer indicators still need to be reported/published	◗ Noted. ◗ Objective is to target resources to the areas of greatest need, rather than to save money - although it most likely will, as it will reduce audit effort and preparation for audit time by the utility in less critical areas. This will become clearer with improved definitions of audit types. ◗ Agree – 1 September reports will continue.
Total Environment Centre ◗ Risk based audit methodology seems a sensible way to proceed. Satisfied that the methodology includes two factors: risk of failure and history of compliance ◗ On the issues of regulatory burden, TEC was surprised by the agencies comments.	◗ Noted. ◗ Noted.

Table B2: GHD response to written comments from Sydney Catchment Authority

Response from stakeholders	GHD Response and action
The risk assessment methodology should be applied each year taking into account specific licence conditions, previous annual audit requirements and findings. The SCA believes that this would result in better informed audits.	Agree. The audit scope should be reviewed on an annual basis
It is unclear if the assessment of risk is being applied to the *failure to meet a condition of the licence* or a *failure to manage assets, water quality etc*. This distinction is important as failure by the SCA to meet an operating licence condition, such as missing a reporting deadline, should not be considered catastrophic but a failure to manage assets or water quality appropriately could be considered catastrophic.	Agree. GHD has assessed the impact non-compliance has on the asset/ water quality etc.
The SCA has its own risk framework and risk register which includes the risks associated with those aspects of our operations that are subject to licence conditions such as the effective management of assets and water quality as a matter of good business practice. These processes result in plans being put into place to address high risks to the business. These high risk areas would have additional assessments undertaken by IPART if it were to apply the methodology as proposed.	GHD recognises this multiple barrier approach to securing the supply of potable water for Sydney. Refer discussion in 3.2.3 of this report.
The risk assessment should only be applied to a *failure to meet the operating licence conditions* and the consequence ratings could then be scaled back to 'minor', 'moderate' and 'major'. The Economic Regulation Authority in Western Australia has a document titled *Audit Guidelines: Electricity, Gas and Water Licences* which addresses the issues raised above.	GHD has applied an interpretation of AS4360 consistent with the Australian Drinking Water Guidelines. Refer discussion in 3.2.3 of this report.
The audit/assessment levels are complex and would be simpler if they only required either a desk-top process or an interview. The resources required by the agency to meet interview requirements are similar whether the audit is a simple interview or a detailed assessment, as we would produce the same range of evidence.	GHD acknowledged this issue with the first draft of the risk assessment presented to the stakeholders. In consultation with IPART, GHD has reduced the audit levels to desk-top and interviews.
There should be a short well defined list of possible controls; these could include where licence conditions are regulated by other regulators, where conditions require independent verification under the licence – these controls would lower the likelihood of the need for an audit interview. Another control that should be considered is the 'catchment to tap' model that they water supply system operates under. For example, water quality risks for the SCA are lowered as a result of downstream barriers provided by Sydney Water, this means that the consequences of a failure on the SCA's part of the system are lessened.	This methodology has been applied to the risk process. A short defined list of controls has not been developed as these are mostly defined by the Clause.

Table B3: GHD response to written comments from Hunter Water Authority

Response from stakeholders	GHD Response and action
We support IPART's view that 2 complete audits of all licence clauses be undertaken during the licence period. We suggest that these audits be conducted in the first year of the licence, to provide input to development of a risk-based audit programme for the remaining licence period; and in Year 3, for input to the licence review process. We consider a full audit in Year 3 to be more appropriate than in Year 4 as the audit will be completed in sufficient time for use in the licence review. This would not necessarily be the case with an audit in the fourth year of the licence period.	The GHD audit program does not specify which years the full audit should be undertaken. It only specifies how many audits of each clause should be undertaken in a licence period.
There is a need to clarify the definition of the various audit types proposed by GHD. At the workshop there was much confusion amongst the participants as to the difference between an "audit" and a "detailed audit". It is our understanding that the audits we have experienced to date were detailed audits. If the proposed approach is to achieve its objectives it is important that all parties – IPART, the agencies and auditors – have a common understanding of what is meant by each of the terms.	These definitions have been clarified for the final report. The audit levels have also been simplified to include on two levels of audit.
The consequence and likelihood ratings need to be better defined. For example, what does "very high impact with catastrophic consequences" really mean? Likewise, does very unlikely mean an occurrence has a 1 in 100 or 1 in 1000 chance of happening? More precise definitions will reduce both subjectivity in their application and the opportunity for disagreement.	GHD applied a qualitative risk assessment, adequate to determine the scope of an audit. This was supported by the use of GHD specialists familiar with the agencies operations and the licences. The semi-quantitative methodology suggested by HWC would provide greater accuracy and would be warranted for an infrastructure option study, where prioritisation of capital expenditure was the outcome.

Table B4: GHD response to written comments from Sydney Water Corporation

Response from stakeholders	GHD Response and action
Sydney Water strongly supports the move to risk based auditing. With over 130 requirements in Sydney Water's Operating Licence there is scope to move away from continuous audit coverage of every one. The 2005/06 operational audit of the Operating Licence found that Sydney Water achieved full or high compliance for 134 of 137 requirements (98%). This outcome provides a justification to streamline the 2006/07 audit process by removing low risk requirements.	The audit of low risk clauses is limited to once during the audit period. In the remainder of years, only a desktop assessment is recommended.
Risk based auditing provides an opportunity to focus the audit effort on high priority areas. As such, I believe the approach taken by GHD needs to be modified before it can be implemented. The methodology does not achieve an appropriate balance of assurance from audits, performance reports, compliance statements and independent reviews. The outcome appears to reallocate existing audit costs across three audit types – desktop, audit interview and detailed assessment – rather than reduce costs.	GHD considered this point made by the agencies and has eliminated the detailed audit assessment. It is noted that IPART has, and continues to have, the discretion to broaden an audit scope if deemed necessary.
I suggest replacing the audit types proposed by GHD with three forms of assurance: 1. Statement of compliance (Low risk) – provided for Licence clauses while on audit holiday, either from Sydney Water or an appropriate regulatory agency. 2. Desktop reviews (Medium risk) – based on existing	Audit types broadly consistent with those suggested by SWC have been adopted. It is noted that the reporting requirements in the legislation do not allow IPART to support the concept of an audit holiday. Therefore a limited level of information is required to support audit statements, where existing reporting requirements do not address compliance.

Response from stakeholders	GHD Response and action
reports, folios of progress and other documentary evidence as requested 3. Full audit (High risk) – normal audit process conducted at a level commensurate with the complexity and priority of the requirement.	
Another issue is the distribution of risks. The Level of Risk Matrix (Confidence Required Matrix) adopted by GHD contains an uneven distribution of Low, Moderate and High rankings (25, 35 and 40 percent respectively). Sydney Water utilises a risk matrix in accordance with AS 4360: 2004 that delivers an even spread of risks (see attached copy). I suggest that IPART adopt Sydney Water's matrix and recalculate the level of risk where appropriate.	Refer to the discussion in Section 3.2.3 of the report.
I consider that GHD's assessment of the consequence and likelihood of a licence breach would have benefited by input from Sydney Water. As discussed in more detail in the attached table, many of the likelihood ratings determined by GHD do not reflect the outcomes of previous audits. As an example, GHD assessed the likelihood of control failure for System Performance Standards as (4) Very Likely – Strong probability of multiple control failures to occur within an audit period. Yet Sydney Water has achieved full compliance with every audit of System Performance Standards from the time of their commencement in 2000/01.	The scope of the risk study prevented further liaison with Sydney Water in this regard. It is noted however that GHD specialists familiar with the SWC operations and the Licence were engaged to determine the qualitative risk assessment. In the specific example referred to by SWC, SWC has over the years been approaching non-compliance with some standards.
Finally, consideration should also be given to the context of the 2006/07 audit. For example, the dual-purpose audit of the asset management system and pricing efficiency review might provide an opportunity to streamline the Licence audit process for asset management requirements. I look forward to working with you to implement risk based auditing. For further advice of clarification please contact Greg Reynolds, Corporate Compliance Manager, on 9350 6117.	No comment. IPART to consider

Appendix C

Sydney Water Corporation Audit program matrix

	2006-10 SWC Operating Licence		Consequence of non-compliance with the clause	Likelihood of control failure	Risk	Regulated by Others	Independent Verification	Complexity (Y/N)	Interpretation/Analysis required (Y/N)	Audit Program Level / 2006/07 audit level
3	***Water Quality***									
3.1	**Drinking Water Quality - Standards**									
	Sydney Water must comply with:									
3.1.1(a)	the Australian Drinking Water Guidelines 1996 relating to Health guideline values and the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc; and	**FULL**	5	2	H	Health	N	N	N	Audit
3.1.1(b)	the fluoridation plant operating targets set out in the Fluoridation Code.	**FULL**	5	2	H	Health	N	N	N	Audit
3.1.2	If there is an inconsistency between the Health guideline values and the Aesthetic guideline values, the Health guideline values will prevail.	**FULL**								NR
3.1.3	Have regard to the concepts of good practice set out by the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health	**FULL**	5	2	H	Health	N	Y	Y	Audit
3.2	**Drinking Water Quality – Monitoring**									
3.2.1	Sydney Water must prepare, to the satisfaction of NSW Health, a comprehensive annual Drinking water quality monitoring plan for the water supply system by 31 March each year, for the duration of this Licence and must:	**FULL**	3	2	M	Health	N	N	N	Desktop
3.2.1(a)	include system performance monitoring and regular sampling, laboratory testing and processes to ensure quality control;	**FULL**								merge
3.2.1(b)	have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply those concepts in the manner, form and timeframes specified by NSW Health;	**FULL**								merge
3.2.1(c)	The plan must include the monitoring of health guideline values	**FULL**								merge
3.2.1(d)	The plan must include the monitoring of aesthetic guideline values	**FULL**								merge
3.2.1(e)	assess the quality of water in Sydney Water's water supply system; and	**FULL**								merge
3.2.1(f)	be undertaken for the period from the Commencement Date to 30 June 2006 and after that for each subsequent financial year.	**FULL**								merge
3.2.2	The sampling frequency and the locations chosen for the monitoring should be such that the results are representative of the quality of water supplied to Consumers.	**FULL**	3	2	M	N	N	N	Y	Desktop
3.3	**Drinking Water Quality - Reporting**									
3.3.1	Sydney Water must produce a quarterly report that includes the water quality monitoring test results undertaken in accordance with clause 3.2. The quarterly report must be placed on its website on the internet and also made available for access by any person, free of any charges imposed by Sydney Water.	**FULL**	4(P)	1	M	N	N	Y	Y	Audit
3.3.2	Sydney Water must provide to NSW Health a copy of the report compiled to comply with clause 3.3.1. If the results do not comply with the Health guideline values or the Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc, Sydney Water must provide NSW Health with an appraisal of the inconsistency, and indicate action to be taken to resolve any non compliance.	**FULL**	4	2	H	Health	N	N	Y	Audit
3.3.3	Sydney Water must comply with requests by NSW Health to provide additional information on water quality. The additional information provided under this clause is to conform to the manner and form specified by NSW Health.	**FULL**	4	2	H	Health	N	N	Y	Audit

3.4	**Drinking Water – Planning**									
3.4.1	Sydney Water must prepare, to the satisfaction of NSW Health, a five-year Drinking water quality management plan (Five-Year Plan) within 5 months after the Commencement Date. Sydney Water must release to the public a discussion paper in relation to the Five-Year Plan within 2 months after the Commencement Date and must engage in Public Consultation on the discussion paper.	**FULL**	5	1	H	Health	N	N	Y	NIL Complete
3.4.2	The Five-Year Plan must include strategies for the comprehensive management of the quality of Drinking water in Sydney Water's water supply system, the aim of which is to control any risk to public health and meet any Aesthetic guideline values extended to Sydney Water in or by this Licence.	**FULL**	5	2	H	Health	N	Y	Y	NIL Complete
3.4.3	In preparing the Five-Year Plan, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.	**FULL**	5	2	H	Health	N	Y	Y	NIL Complete
3.4.4	Sydney Water must prepare, and make available to NSW Health by 1 October each year, an annual report on the implementation of the Five Year Plan. The report must include details of: (a) any proposed amendments to the Five Year Plan needed to protect public health or to ensure the effective operation of the Plan; and (b) any additional water quality improvement actions identified in the preceding year through the Drinking water quality monitoring data or by NSW Health and action taken to implement them.	**NR**	5	2	H	Health	N	Y	Y	Audit
3.5	**Drinking Water - Incident Management**									
3.5.1	Sydney Water must immediately report to NSW Health any information or event in the delivery of the Services or in its systems or operations which may have risks for public health.	**FULL**	4	1	M	Health	N	N	N	Audit
3.5.2	From the Commencement Date, Sydney Water must maintain the existing Drinking water quality incident management plan (Incident Plan) prepared to the satisfaction of NSW Health and that Incident Plan must remain in place until any new plan is developed in agreement with NSW Health.	**FULL**	5	1	H	Health	N	N	N	Audit
3.5.3	The Incident Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of Drinking water incidents including media and stakeholder liaison and any notification to Consumers of public health advice received from NSW Health.	**FULL**	5	1	H	Health	N	Y	Y	Audit
3.5.4	In preparing the Incident Plan under clause 3.5.2, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.	**FULL**	5	1	H	Health	N	Y	Y	Audit
3.6	**Other Grades of Water**									
3.6.1	Other grades of water supplied by Sydney Water must be supplied according to relevant guidelines specified by NSW Health, DEC, DIPNR and the Department of Primary Industries.	**FULL**	4	2	H	Health,DECC.Dop and DPI	N	Y	Y	Audit
3.6.2	Other grades of water supplied by Sydney Water does not include Drinking water but does include Re-use water.	**NR**								NR
3.6.3	Where there is a conflict between any of the guidelines, requirements or standards applying to Sydney Water under clause 3.6, the Minister's decision will prevail.	**NR**								NR
4	**INFRASTRUCTURE PERFORMANCE**									
4.4	**Compliance with Performance Standards**									
4.4	Sydney Water must comply with the water pressure standard in clause 4.1.1, the water continuity standard in clause 4.2.1 and the sewage overflow standard in clause 4.3.1.	**FULL**	4	3	H	N	N	Y	Y	Audit
4.5	**Reporting on system performance standards**									
4.5.1	By no later than 1 September each year, Sydney Water must report to IPART on its compliance with the water pressure standard, the water continuity standard and the sewage overflow standard.	**FULL**	4	1	M	N	N	N	N	Audit
4.5.2	By no later than 1 September each year, Sydney Water must report to IPART on the number of Properties in the preceding financial year that experience the following:(a) a water pressure failure; (b) Planned Water Interruption or an Unplanned Water Interruption; (c) an Uncontrolled Sewage Overflow.	**FULL**	4	1	M	N	N	N	N	Audit

4.5.3	Sydney Water must maintain record systems sufficient to enable it to measure accurately its performance against the water pressure standard, the water continuity standard and the sewage overflow standard and to enable measurement and reporting by Sydney Water of those standards by delivery systems. Delivery system in this clause means the geographic classification used by Sydney Water for its own internal purposes, based on geographic regions forming part of the Services.	**FULL**	3	2	M	N	N	Y	Y	Audit
4.5.4	Sydney Water must provide IPART with physical or electronic access to the records kept by Sydney Water that enable it to report under clause 4.5.1.	**FULL**	1	1	L	N	N	N	N	Audit
4.6	**Review of system performance standards**									
4.6.1	At least once during this Licence, IPART must consult with Sydney Water and other stakeholders and report to the Minister on whether the water pressure standard, the water continuity standard and the sewage overflow standard should be amended, and if so the nature of the amendments.	**NR**								NR
4.6.2	The report under clause 4.6.1 must include an analysis of the benefits and costs of any amendments.	**NR**								NR
4.6.3	Following receipt of the report the Minister, or a person appointed by the Minister, may publish a notice in the NSW Government Gazette which lists the amendments that must be adopted by Sydney Water.	**NR**								NR
4.6.4	Any amendments to the performance standards that must be adopted by Sydney Water under clause 4.6.3 must be incorporated into the Customer Contract as soon as reasonably possible and also considered as part of any review of the Customer Contract.	**NR**	2	1	L					Desk-top
4.7	**Service quality and system performance indicators**									
4.7.1	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 in Schedule 1.	**FULL**	2	2	L	N	N	Y	Y	Desk-top
4.7.2	Where there is any inconsistency between any of those indicators (or their application), the decision of IPART will prevail.	**NR**								N/A
4.7.3	By 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART its performance against the service quality and system performance indicators in Schedule 1 for the immediately preceding financial year. The report must include an analysis of any problems of a systemic nature.	**FULL**	3	2	M	N	N	Y	Y	Desk-top
4.7.4	As part of its report, Sydney Water must provide IPART with physical and electronic access to the records kept by Sydney Water that enable it to report under clause 4.7.3.	**FULL**	2	1	L	N	N	N	N	Desk-top
4.8	**Asset Management Obligation**									
4.8	Sydney Water must ensure that its Assets are managed consistent with;									
4.8(a)	(a) the terms and conditions in this Licence, and its obligations under the Customer Contract and all applicable laws with which Sydney Water must comply; (b) subject to (a) above, the lowest life cycle cost and acceptable risk of the Assets; (c) the whole of life of the Assets; and (d) its assessment of the risk of loss of the Assets, and capacity to respond to a potential failure or reduced performance of the Assets.	**NR**	5	4	H	N	N	Y	Y	Audit once
4.9	**Reporting on Asset Management System**									
4.9.1	At least once during this Licence at a time agreed with IPART, Sydney Water must report to IPART on the state of each group of Assets managed by Sydney Water.	**NR**	4	1	M	N	N	Y	Y	Audit once
4.9.2(a)	Report must include description of the processes, practices and plans used to manage assets (b) Report must include description of each asset group (c) Report must include assessment of expected capacity of the assets (d) Report must include assessment of major issues or constraints on current/future performance of the assets (e) Report must include strategies and expected costs of future investment in assets (f) Report must include progress in implementing the management of assets and any recommended improvements (g) Report must include such other matters reasonably required by IPART	**NR**	4	1	M	N	N	Y	Y	Audit once
4.10	**Auditing the Asset Management System**									
4.10.1	At least once during this Licence IPART may (at a time it determines) conduct an audit of Sydney Water's compliance with clauses 4.8 and 4.9. The audit may form part of an Annual audit or be conducted separately from an Annual audit, at the discretion of IPART.	**NR**								NR

4.10.2	In addition, IPART may at any time audit Sydney Water's compliance with clauses 4.8 and 4.9 for the purpose of: (a) investigating and reporting on, or reviewing the pricing of Sydney Water's Services under the IPART Act; or (b) investigating compliance by Sydney Water with specific areas of its Asset management.	**NR**								NR
4.10.3	An audit undertaken under clause 4.10.1 or 4.10.2, must comply with the scope and audit specifications determined by IPART.	**NR**								NR
4.10.4	The Minister must be advised of any such decision to audit and, subsequent to the audit, be provided with a report on the outcomes of the audit.	**NR**								N/A
4.11	**Water Leakage**									
4.11.1	Sydney Water must ensure that by 30 June 2009, the amount of Water leakage from its Drinking water supply system does not exceed 105 megalitres a day.	**NR**	4(P)	1	M	N	N	N	N	Desktop
4.11.2	Each year Sydney Water must calculate the level of Water leakage from its Drinking water supply system using the assumptions and methodology approved by IPART.	**FULL**	4(P)	3	H	N	N	N	Y	Audit
4.11.3	On 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART on: (a) the economic level of Water leakage for the preceding financial year and how that level of Water leakage is calculated; and (b) its assessment of its progress towards compliance with clause 4.11.1		4(P)	3	H	N	N	N	Y	Desktop
4.12	**Reports Related to Water Leakage**									
4.12.1	Sydney Water must report to IPART no later than 1 September 2005 and at the same time in each subsequent year on the number of bulk water meters in Sydney Water's Drinking water system that Sydney Water:	**FULL**	3(P)	2	M	N	N	N	Y	Audit
4.12.2	Sydney Water must report to IPART no later than 1 September 2005 and at the same time in each subsequent year on the number of water pressure control zones in Sydney Water's Drinking water system that Sydney Water: (a) intends to complete in the current and subsequent financial years; and (b) had planned to complete in a financial year compared with the number actually completed in that financial year.	**FULL**	3(P)	2	M	N	N	N	N	Desktop
4.12.3	On 1 September 2005, and on 1 September of each subsequent year, Sydney Water must report to IPART on the number of bursts, breaks or leaks (in the trunk and reticulation component of Sydney Water's Drinking water system between water treatment plants and a Property) which occurred in the immediately preceding financial year and the time taken by it to repair those bursts, breaks or leaks.	**FULL**	3(P)	2	M	N	N	N	N	Desktop
4.12.4	Sydney Water must report to IPART, no later than 1 September 2005 and at the same time in each subsequent year, on: (a) the number of kilometres of reticulation mains it inspected during the preceding financial year for Water leakage; and (b) (a) its program during the preceding financial year for inspecting reservoir zones for Water leakage and for rehabilitating reservoir zones to prevent or correct Water leakage.	**FULL**	3(P)	3	M	N	N	N	N	Desktop
4.13	**Response time for water mains breaks**									
4.13.1	Sydney Water's response to water main breaks and leaks (in the trunk and reticulation components of Sydney Water's drinking water 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, shall be as follows: (a) Priority 6 breaks/leaks: 70% of jobs within 2 hours 90% of jobs within 3 hours (b) Priority 5 breaks/leaks: 65% of jobs within 3 hours 85% of jobs within 6 hours (c) Priority 4 breaks/leaks: 50% of jobs by end of next working day 100% of jobs within 5 days, subject to clause 4.13.4	**MOD**	4(P)	3	H	N	N	Y	Y	Audit
4.13.2	Categorisation of Priorities 4, 5 and 6 is to be finalised by IPART and published on Sydney Water's Internet site www.sydneywater.com.au	**NR**								N/R
4.13.3	On 1 September 2006, and on 1 September of each subsequent year, Sydney Water must report to the Minister and IPART on the number of breaks or leaks (in the trunk and reticulation components of Sydney Water's drinking water system between water treatment plants and a property) which occurred in the immediately preceding financial year and Sydney Water's performance against the targets in clause 4.13.1. The Minister from time to time may adjust targets based on Sydney Water's performance.	**FULL**	3(P)	2	M	N	N	N	Y	Audit

4.13.4	Due to operational, planning and customer impact issues, it is recognised that Sydney Water will not be able to respond to 100% of priority 4 jobs within 5 days. Therefore Sydney water shall annually submit to IPART a list of all instances of non-compliance with the above target and the reasons for that non-compliance. This will be reviewed as part of the annual operational audit.	FULL	3(P)	2	M	N	N	N	Y	Audit
4.14	**Priority Sewerage**									
4.14.1	Meet requirement of 'Priority Sewerage Program':		3(P)	2	M	N	N	N	Y	Desktop
4.14.1 (a)	By June 2009 connect to all available lots eligible for connection under Stage One (a) By June 2009 report to the Minister on service to Menangle/Menangle Park (b) By 30 June 2006 Sydney Water must report to the Minister on how it intends to service the area of Menangle/Menangle Park; and (c) By June 2009 commence work to permit connection to 30% of lots eligible for connection under Stage Two	NR								
4.14.2	Should Sydney Water incur delays caused by consent authorities that impair its ability to meet the above targets, Sydney Water is required to write to the Minister for Energy and Utilities, to advise the Minister of the reasons for the delay.	NR	3(P)	2	M	N	N	N	Y	Desktop
4.14.3	On 1 September 2006 and at the same time in each subsequent year Sydney Water must report to IPART on its assessment of its progress towards compliance with clause 4.14.1 and the reasons which lead it to reasonably believe that (as at the date of its report) it will or will not be able to comply with clause 4.14.1.	Full	3(P)	2	M	N	N	N	N	Desktop
4.14.4	In this clause the Stage 1 Priority Sewerage Program is the program (incorporating the principle of least cost technology) for improving sewerage services in unsewered areas within Sydney Water's Area of Operations more fully described by the following: (a) by Schedule 5; and (b) announcements made by the Minister (and the Government of NSW) which may include announcements made under this Licence clarifying or amending paragraph (a), which announcements will prevail if they are inconsistent with paragraph (a) .	NR								N/R
5	**CUSTOMER AND CONSUMER RIGHTS**									
5.1	**Customer contract**									
5.1.1	The Customer Contract applies for the purpose of section 54 of the Act and may only be varied in accordance with section 59 of the Act.	NR								NR
5.1.2	Subject to section 56 of the Act, the Customer Contract automatically applies to persons specified in section 55(1) of the Act.	FULL								NR
5.1.3	The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided through systems required under this Licence. These rights and obligations are in addition to the rights and obligations conferred by the Act and any other law.	FULL								NR
5.1.4	A copy of the Customer Contract, and any variations to it must be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge.	FULL	2	1	L	N	N	N	N	Desktop
5.1.5	Unless otherwise required by the Minister, IPART must initiate a review of the Customer Contract during the term of the Licence. The review must: (a) include an evaluation of the effectiveness of the financial hardship and other Customer protection provisions; and (b) have regard to the system performance standards in clauses 4.1.1, 4.2.1 and 4.3.1, or as determined by the Minister under clause 4.6.3.	NR								NR
5.1.6	By the completion of the review, IPART must produce a report setting out its findings and recommendations. A copy of the report must be provided to the Minister upon its completion.	NR								NR
5.1.7	Sydney Water must take all steps necessary to issue an amended Customer Contract that addresses those recommendations of the review report adopted by the Minister within 3 months of the Minister's adoption of the review report.	NR	2	1	L	N	N	N	N	Desktop
5.1.8	Sydney Water must prepare a pamphlet that:	HIGH	2	1	L	N	N	N	N	Nil - Complete
5.1.8(a)	provides a brief explanatory introduction to the Customer Contract	FULL								merge
5.1.8(b)	summarises the key rights and obligations of Customers, under the Customer Contract;	FULL								merge
5.1.8(c)	refers to the types of account relief available for Customers experiencing financial hardship; and	FULL								merge
5.1.8(d)	contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operations.	HIGH								merge

5.1.9	The pamphlet prepared under clause 5.1.8 must be updated when changes are made to the Customer Contract under clause 5.1.7 and must be disseminated by Sydney Water free of charge to:	**FULL**	2	1	L	N	N	N	N	Desktop
5.1.9(a)	Customers, at least once annually with their quarterly or other bills; and	**FULL**								merge
5.1.9(b)	any other person on request.	**FULL**								merge
5.1.10	As provided by and subject to section 57 of the Act, Sydney Water may enter into other contracts or arrangements for the supply of Services. The terms of any such contract or arrangement are such as may be negotiated between Sydney Water and any such person.	**FULL**	2	1	L	N	N	N	N	Desktop
5.2	**Consumers**									
5.2	Sydney Water must fulfil its obligations under the Customer Contract relating to complaint handling and complaint resolution procedures as if those obligations also extended to Consumers.	**FULL**	3	1	M	N	N	N	N	Desktop
5.3	**Code of Practice and Procedure on Debt and Disconnection**									
5.3.1	Sydney Water must have in place a code of practice and procedure on debt and disconnection.	**FULL**	3	1	M	N	N	N	N	Desktop
5.3.2	The code of practice and procedure on debt and disconnection must provide for:	**FULL**	3	1	M	N	N	N	N	Desktop
5.3.2(a)	deferred payment or payment by instalment options for consumption bills; and	**FULL**								merge
5.3.2(b)	the payment options referred to in (a) to be advised in consumption bills.	**FULL**								merge
5.3.3	Sydney Water must include the code of practice and procedure on debt and disconnection in its Customer Contract.	**FULL**	3	1	M					Desktop
5.3.4	Sydney Water must disseminate information on its code of practice and procedure on debt and disconnection free of charge to:	**FULL**	3	1	M			N	N	Desktop
5.3.4(a)	Customers, at least once annually with their quarterly or other bills; and	**FULL**								merge
5.3.4(b)	any other person on request.	**FULL**								merge
5.4	**Customer Councils**									
5.4.1	In accordance with the Act, Sydney Water must have in place and regularly consult with one or more customer councils to enable community involvement in issues relevant to the performance of Sydney Water's obligations under this Licence.	**FULL**	2	2	L	N	N	N	N	Desktop
5.4.2	A customer council may be utilised by Sydney Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Sydney Water and on the Customer Contract, in accordance with the terms of the relevant customer council charter, and on such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.	**FULL**	2	2	L	N	N	N	N	Desktop
5.4.3	Sydney Water must appoint the members of a customer council, consistent with this Licence.	**HIGH**	2	2	L	N	N	N	N	Desktop
5.4.4	At all times, the membership of one or more customer councils must between them include a representative from at least each of the following: (a) business and consumer groups; (b) low income households; (c) people living in rural and urban fringe areas; (d) residential consumers; (e) environmental groups; (f) local government; and (g) the Ethnic Communities Council.	**HIGH**	2	1	L	N	N	N	N	Desktop
5.4.5	Sydney Water may allow a representative under clause 5.4.4 to serve on so many customer councils as it considers appropriate to best discharge the tasks assigned to him or her.	**NR**								NR
5.4.6	The customer council or customer councils under this Licence must comprise:		2	1	L	N	N	N	N	Desktop
5.4.6(a)	members of any customer council prior to the Commencement Date ("existing members"); and	**FULL**								
5.4.6(b)	any other person appointed by Sydney Water, consistent with clause 5.4.4.	**NR**								
5.4.7	Subject to clause 5.4.8 the term of a member of a customer council (including the term of an existing member) will expire 2 years after his or her appointment.	**NR**	2	1	L	N	N	N	N	Desktop
5.4.8	At least half of the persons appointed as members of a customer council must be new members. That is, they must not be persons who were members of a customer council at any time during the period of 2 years before the date of their appointment.	**NR**	2	1	L	N	N	N	N	Desktop
5.4.9	No person may be appointed as a member of a customer council for more than 2 consecutive terms (including, without limitation, any term served as a replacement member under 5.4.10).	**NR**	2	1	L	N	N	N	N	Desktop

5.4.10	If a member's place becomes vacant before the expiration of their term, Sydney Water may appoint a suitable replacement for the remainder of that member's term.	**FULL**	2	1	L	N	N	N	N	Desktop
5.4.11	If Sydney Water chooses to establish one or more customer councils the majority of members of which are not individuals, clauses 5.4.8, 5.4.9 and 5.4.12 do not apply to those customer councils.	**NR**	2	1	L	N	N	N	N	Desktop
5.4.12	Existing members will be eligible to be appointed for one term and other members for 2 consecutive terms. For the avoidance of doubt: (a) existing members will be regarded as having served their first term at the end of the period, mentioned in clause 5.4.7; and (b) replacement members appointed under clause 5.4.10 will be regarded as having served their first term at the expiration of the term of the member they replaced.	**NR**	2	1	L	N	N	N	N	Desktop
5.4.13	Within 3 months of establishing a customer council, Sydney Water must develop in consultation with members of each customer council, a customer council charter that addresses the following issues: (a) the role of the customer council; (b) selection criteria on how members will be drawn from the community; (c) information on how the customer council will operate; (d) induction processes for new members; (e) a description of the type of matters that will be referred to the customer council; (f) 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; (g) communicating the outcome of the customer council's work to Sydney Water; (h) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and (i) funding and resourcing of the customer council by Sydney Water including sitting fees and expenses for meml	**FULL**	2	2	L	N	N	N	N	Desktop
5.4.14	There must be a charter for each customer council. However a single charter may be expressed to apply to more than one customer council.	**FULL**	2	2	L	N	N	N	N	Desktop
5.4.15	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 the customer council to discharge the tasks assigned to it.	**HIGH**	2	2	L	N	N	N	N	Desktop
5.4.16	Sydney Water must report annually on the issues considered by, and the achievements, of each of its customer councils. A copy of the report and each charter for a customer council must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its offices for access or collection by any member of the public, also free of charge.	**HIGH**	2	2	L	N	N	N	N	Desktop
5.5	**Customer Service Indicators**									
5.5.1	Sydney Water must maintain record systems that are sufficient to enable it to measure accurately its performance against the Customer service indicators set out in Schedule 2.	**HIGH**	3	2	M	N	N	N	Y	Desktop
5.5.2	By no later than 1 September 2006 and at the same time in each subsequent year , Sydney Water must report to IPART its performance against the Customer service indicators in Schedule 2 for the immediately preceding financial year.	**FULL**	3	2	M	N	N	N	N	Desktop
5.5.3	The report must include an analysis of any problems of a systemic nature.	**FULL**	3	2	M	N	N	N	Y	Desktop
5.5.4	It will be sufficient compliance with this clause if the report required by this clause is integrated into the report required by Sydney Water under clause 4.7.3.	**FULL**				N	N	N		NR
6	**COMPLAINTS AND DISPUTE HANDLING**									
6.1	**Internal Dispute Resolution Process**									
6.1.1	Sydney Water must establish and maintain internal complaint handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Sydney Water.	**FULL**	3	1	M	N	N	N	N	Desktop
6.1.2	The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS4269-1995 Complaint Handling.	**HIGH**	3	1	M	N	N	N	N	Desktop
6.1.3	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 procedure works.	**FULL**	3	2	M	N	N	N	N	Desktop
6.1.4	Sydney Water must provide information of the nature described in clause 6.1.3 to Customers through their quarterly, or other, bills at least once annually.	**FULL**	3	1	M	N	N	N	N	Desktop

6.2	**External Dispute Resolution Scheme**									
6.2.1	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.	**FULL**	4	1	M	EWON	N	N	N	Desktop
6.2.2	The industry based dispute resolution scheme so established by Sydney Water is subject to the Minister's approval.	**NR**								NR
6.2.3	Sydney Water must prepare a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed.	**FULL**	2	1	L	N	N	N	N	Desktop
6.2.4	Sydney Water must provide the pamphlet to Customers through their quarterly or other bills, at least once annually.	**FULL**	2	1	L	N	N	N	N	Desktop
6.2.5	Sydney Water must provide IPART with written reports of the determinations made by the dispute resolution body based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. Where considered appropriate by Sydney Water and the dispute resolution body, confidentiality arrangements are to be made so as not to disclose the Customer or Consumer's identity in such reports.	**NR**	2	2	L	N	N	N	N	Desktop
6.2.6	Sydney Water must report each year to IPART based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. The report must take into account any issues raised by the dispute resolution body and must contain the following information:	**FULL**	2	2	L	N	N	N	N	Desktop
6.2.6(a)	the number and types of complaints received by the dispute resolution body, classified in accordance with the dispute resolution body's reporting arrangements; and	**FULL**								merge
6.2.6(b)	any other relevant information required by IPART to be included in the report.	**NR**								merge
6.2.7	The report in clause 6.2.6 must be made available to the public free of charge.	**FULL**	2	1	L			N	N	Desk-top
6.3	**Complaints to other bodies**									
6.3.1	Sydney Water must report to the IPART by no later than 1 September each year on all complaints made to Sydney Water in the preceding financial year that relate to its performance under this Licence or the Customer Contract that were referred for resolution by an external dispute resolution body (other than a court), for example the Consumer Trader and Tenancy Tribunal.	**FULL**	2	2	L			N	N	Desk-top
6.3.2	Sydney Water must report to the IPART by no later than 1 September each year on all civil actions in the preceding financial year that were brought against Sydney Water in all courts where the person bringing the action sought damages or other relief against Sydney Water for Sydney Water's failure to comply with a provision of its Customer Contract.	**HIGH**	2	2	L			N	N	Desk-top
6.3.3	The reports required under clauses 6.3.1 and 6.3.2 must contain the		2	2	L			N	N	Desk-top
6.3.3(a)	the number and types of matters;	**HIGH**								merge
6.3.3(b)	the outcome of the matters;	**FULL**								merge
6.3.3(c)	if the matters were subject to a negotiated settlement, how they were settled;	**NR**								merge
6.3.3(d)	any problems of a systemic nature arising from the matters or which the matters uncovered; and	**NR**								merge
6.3.3(e)	any other information that IPART may reasonably request.	**NR**								merge
7	**Environment – Indicators and Management**									
7.1	**Environmental Indicators**									
7.1.1	Each year Sydney Water must monitor, record, compile data and report on the environmental performance indicators in Schedule 3 for the immediately preceeding financial year.	**FULL**	3	1	M	N	N	Y	Y	Desk-top
7.1.2	By no later than 1 September 2006 and at the same time in each subsequent year, (or an alternative later date specified by IPART), Sydney Water must report on its performance against the environmental performance indicators, in Schedule 3 in a manner to be approved by IPART.	**FULL**	3	1	M	N	N	N	Y	Desk-top

7.1.3	The report must provide information which enables a year to year comparison in relation to Sydney Water's performance against the environmental performance indicators in Schedule 3. In particular, Sydney Water is to compare the performance indicators in Schedule 3 with historical annual values over at least the previous 10 years where comparable data is available.	**HIGH**	3	1	M	N	N	N	Y	Desk-top
7.1.4	The information in the report referred to in clauses 7.1.1 and 7.1.2 is to be made available to the public by Sydney Water. Copies of the information are to be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge.	**Full**	2	1	L	N	N	N	N	Desk-top
7.2	**Environmental Management**									
7.2.1	By no later than 1 month from the Commencement Date, Sydney Water must have in place an environmental management system certified to AS/NZS IS0 14001 to manage environmental risk.	**FULL**	3	2	M	N	Y	N	Y	Desk-top
7.2.2	Sydney Water must produce a five-year Environment Plan by 30 September 2005. Sydney Water must annually review and update the Environment Plan in accordance with its environmental management system referred to in clause 7.2.1.	**FULL**	3	2	M	N	N	N	N	Desk-top
7.2.3	Sydney Water must engage in Public Consultation in developing the Environment Plan required by clause 7.2.2.	**FULL**	3	2	M	N	N	N	N	NR - Complete
7.2.4	The environment Plan must:	**FULL**	3	2	M	N	N	N	N	Desk-top
7.2.4(a)	contain details of Sydney Water's program for environmental improvement for its water, waste water and stormwater strategies, as well as the environmental aspects of its other activities such as energy management, waste minimisation, heritage and Botany Wetlands;									merge
7.2.4(b)	endorse Ecologically Sustainable Development principles;	**FULL**								merge
7.2.4(c)	be integrated into Sydney Water's business plans,	**FULL**								merge
7.2.4(d)	incorporate the objectives of the energy management plan of Sydney Water to: (i) improve energy efficiency and generate renewable energy; and (ii) minimise the environmental impact of its energy consumption; and (iii) comply with all relevant energy related regulation; and	**HIGH**								merge
7.2.4(e)	incorporate environmental improvement targets and time tables for Sydney Water to achieve over the term of the Environment Plan	**HIGH**								merge
7.2.5	The Environment Plan must be posted each year on Sydney Water's website on the internet for downloading free of charge, and made available at its premises for access or collection by any member of the public.	**FULL**	2	1	L	N	N	N	N	Desk-top
7.2.6	By no later than 1 September each year, or an alternative later date specified by IPART, Sydney Water must report to IPART on its progress for the previous financial year in meeting the Environment Plan. The report is to include Sydney Water's compliance with the targets and timetables in clause 7.2.4, and in managing the Botany Wetlands. The information in the report must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its premises for access or collection by any member of the public.	**HIGH**	2	1	L	N	N	N	Y	Desktop
7.2.7	Each year Sydney Water must review the Environmental Plan by consulting with DEC, DIPNR, IPART, and peak environmental non-governmental organisations for the purpose of considering the views of those consulted organisations and whether they seek amendments to the Environmental Plan in the subsequent year.	**FULL**	3	2	M	DEC CIPNR IPART PENGOs	N	N	Y	Desk-top
7.3	**Potable Water Use**									
7.3.1	Sydney Water must ensure that potable water use for treatment processes at each of the following sewage treatment plants has been reduced by 80% in volumetric terms from its 2003/04 usage rates by 30 June 2009 – Malabar, North Head and Bondi.	**NR**	3	1	M	N	Y	N	N	Desk-top
7.3.2	By 30 June 2009 Sydney Water must ensure that all sewage treatment plants (other than Malabar, North Head and Bondi, and storm flow sewage treatment plants at Fairfield, Bellambi and Port Kembla) use at least 85% recycled water for treatment processes.	**NR**	3	1	M	N	Y	N	N	Desk-top

7.3.3	Sydney Water must undertake potable water efficiency audits at all sewage treatment plants (other than Malabar, North Head and Bondi) and implement appropriate findings under a water conservation plan by 30 June 2009.	**NR**	3	1	M	N	Y	N	N	Desk-top
7.3.4	By no later than 1 September each year, Sydney Water must report to IPART on its progress in relation to clause 7.3.1, 7.3.2 and 7.3.3 for the previous 12 months, to enable the IPART to consider and report on the matter as part of the Annual audit.	**Full**	3	1	M	N	N	N	N	Desk-top
7.4	**Metering of Individual Units**									
7.4.1	Within 9 months of the commencement of this licence, Sydney Water must;									
7.4.1(a)	Conduct at least one trial to determine the costs and benefits and to identify any impediments to providing for each unit in new multi-unit buildings to have an individual meter which is read on a quarterly basis.	**Full**								
7.4.1(b)	Evaluate the outcomes of the trial and within 6 months of completion of the trial, provide a report to the Minister outlining the outcomes of the trial and Sydney Water's plans for future metering of units in multi-unit buildings.	**NR**	3	2	M	N	N	N	Y	Audit 06/07 only
9.1	**Water Conservation Target**									
9.1.1	Sydney Water must take action to reduce the quantity of water (other than Re-use water) it draws from all sources to meet the water conservation target of 329 litres per capita per day by 2010/2011 (being a reduction of 177 litres per capita per day or 35% from the 1990/1991 baseline).	**FULL**	5(P)	3	H			Y	Y	Audit
9.1.2	In assessing compliance with the water conservation target in clause 9.1.1, reasonable adjustments are to be made for the effects of weather on water usage.	**FULL**								NR
9.1.3	By no later than 1 September each year, Sydney Water must report to IPART on its progress in complying with the water conservation target in clause 9.1.1 (which may include any targets for Water leakage), to enable IPART to consider and report on the matter as part of the Annual audit.	**FULL**	3	1	M	N	N	N	N	Audit
9.2	**Demand Management Strategy**									
9.2.1	Sydney Water must give due consideration to demand side management as the basis for planning the future provision of its Services, including addressing Water leakage.	**FULL**	5(P)	3	H			Y	Y	Audit
9.2.2	By no later than 1 September each year, Sydney Water must provide a demand management strategy implementation report to IPART that reports on its implementation of its demand management strategy for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.	**FULL**	3	1	M	N	N	N	N	Audit
9.2.3	The demand management strategy implementation report must:		4	2	H	N	N	N	Y	Audit
9.2.3(a)	contain an estimate of past, current and projected water uses and distinguish between residential, industrial, commercial and government uses;	**FULL**								merge
9.2.3(b)	describe the frequency and magnitude of expected supply deficiencies, including those arising as a result of wastage or loss, drought or emergency;	**FULL**								merge
9.2.3(c)	identify conservation measures currently adopted and being practised;	**FULL**								merge
9.2.3 (d)	describe, cost and evaluate additional conservation measures;	**FULL**								merge
9.2.3 (e)	describe future plans for water reclamation and strategies to alter water use practices, including those relating to the installation of more efficient water appliances and devices by users;	**FULL**								merge
9.2.3 (f)	evaluate these plans in terms of their cost and contrast with the cost of alternative water supplies;	**NR**								merge
9.2.3 (g)	prioritise and schedule the implementation of courses of action found to be cost effective;	**FULL**								merge
9.2.3(h)	identify strategies for reducing Water leakage;	**FULL**								merge
9.2.3(i)	include components of a water balance table consistent with the format and definitions in the IWA water table;	**FULL**								merge
9.2.3(j)	include consumption of water across sectors in a format and content specified by IPART; and	**FULL**								merge
9.2.3(k)	for each of the demand management activities of Sydney Water in the preceding financial year, report in a schedule in a format and content agreed between IPART and Sydney Water: (i) the planned and actual water savings and planned and actual expenditure; and (ii) the actual measures of outcomes for performance indicators.	**FULL**								merge
9.2.4	At least once during this Licence, Sydney Water must engage a suitably qualified third party to verify the accuracy and soundness of its mathematical models for projecting future demands for water usage and report the results to IPART.	**FULL**	5(P)	3	H	N	Y	N	Y	NIL Complete

9.3	**Reducing Discharges**									
9.3.1	Sydney Water must meet the Re-use water targets set by the Minister or Sydney Water from time to time.	**NR**	4	2	H	N	N	Y	Y	Audit
9.3.2	Sydney Water must take action to generate Re-use water from the sewage or effluent of Customers and Consumers by intercepting or otherwise preventing the discharge of that sewage or effluent into the ocean, waterways and other waters.	**FULL**	4	1	H	N	N	Y	N	Audit
9.3.3	By no later than 1 September each year, Sydney Water must report to IPART on its progress in meeting the Re-use water target required under clause 9.3.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.	**NR**	3	1	M	N	N	N	N	Audit
9.4	**Water Conservation Rating and Labelling**									
9.4.1	Sydney Water, through continuing support for any national scheme (whether legislated or not), is to encourage manufacturers of water appliances to improve the water use efficiency of these appliances where consistent with Sydney Water's objectives.	**FULL**	2	1	L	N	N	N	N	Desk-top
9.4.2	By no later than 1 September each year, Sydney Water must report to IPART on its performance under clause 9.4.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.	**FULL**	2	1	L	N	N	N	N	Desk-top
9.5	**Review of Part 9 of Licence**									
	During this Licence IPART may review Part 9 of the Licence if the Minister directs it to do so.	**NR**								NR
10 **10.4**	**Areas of Operations** **Connection of Services**									
10.4.1	Subject to Sydney Water coninuing to be in compliance with any applicable law, Sydney Water must ensure that its Services are available for connection on request to any property situated in the areas of operation.	N/A								
12 **12.2**	**Operational Audits of this Licence** **What the audit is to report on**									
12.2.1	IPART or the person undertaking the Annual Audit may investigate and prepare a report on any or all of the following:									
12.2.1(a)	compliance by Sydney Water with its obligations in each of Parts 3, 4, 5, 6, 7, 8, 9 and 10;									
12.2.1(b)	Sydney Water's implementation of any Memorandum of Understanding;	**MOD**	3	2	M	Y	N	N	Y	Desk-top
12.2.1(c)	any other matter required by the Licence, the Act or administrative direction to be assessed and considered as part of the Annual Audit.									

Appendix D

Sydney Catchment Authority Audit program matrix

2006-10 SCA Operating Licence		Compliance rating 05/06 Audit	Consequence of non compliance with the clause	Likelihood of control failure (effectiveness)	Risk	Regulated by Others (Y/N)	Independent Verification (Y/N)	Complexity (Y/N)	Interpretation/ Analysis required (Y/N)	Audit program Level/ 2006/07 audit level
Licence Clause	**Summary of Requirement**									
3	BULK RAW WATER QUALITY									
3.1	Specific Water Characteristics									
3.1.1	Within 6 months from the Commencement Date, the SCA must compile, to the satisfaction of NSW Health and SWC a list of specific water characteristics for the purpose of:	N/A	4	2	H	Health/ SWC	N	N	N	Single Audit 06/07 only
3.1.1(a)	identifying the water characteristics which should be monitored and reported on in order to protect human health									merge
3.1.1(b)	seeking to prevent water quality from degrading over time									merge
3.1.2	The list of Specific Water Characteristics must be monitored and reported under clause 3.6. This list is to be derived from the Australian Drinking Water Guidelines 2004 and must be updated, as directed by NSW Health from time to time, by the SCA to the satisfaction of NSW Health and Sydney Water Corporation	N/A	3	2	M	Health/ SWC	N	N	N	Audit
3.1.3	The SCA must provide IPART with a copy of the list of Specific Water Characteristics (as updated from time to time), as soon as possible after it is agreed to by NSW Health and Sydney Water Corporation. The SCA must make a copy of that list available to the public after it has been provided to IPART.	N/A	3	2	M	Health/ SWC	N	N	N	Audit
3.1.4	If the SCA, NSW Health and Sydney Water Corporation cannot agree on a list of Specific Water Characteristics, the views of NSW Health will prevail and the SCA must accept the list of Specific Water Characteristics determined by NSW Health.	N/A	3	2	M	Health/ SWC	N	N	N	Audit
3.2	Health-Related Water Quality Characteristics									
3.2.1	Within 6 months from the Commencement Date, the SCA must compile, to the satisfaction of NSW Health, a list of health related water quality characteristics (Health Related Water Quality Characteristics) for the purpose of:	N/A	4	2	H	Health	N	Y	N	Single Audit 06/07 only
3.2.1(a)	identifying relevant contaminants and other water characteristics that may have an adverse impact on human health									merge
3.2.1(b)	protecting human health by ensuring that the health guideline values in the Australian Drinking Water Guidelines 2004 for those characteristics are not exceeded									merge
3.2.2	The list of Health Related Water Quality Characteristics must be monitored and reported under clause 3.6. This list is to be derived from the list of Specific Water Characteristics in clause 3.1.1 and must be updated, as directed by NSW Health from time to time, by the SCA to the satisfaction of NSW Health.	N/A	3	2	M	Health	N	N	N	Desk-top

3.2.3	The SCA must provide IPART with a copy of the list of Health Related Water Quality Characteristics (as updated from time to time), as soon as possible after it is agreed with NSW Health. The SCA must make a copy of that list available to the public after it has been provided to IPART.	N/A	3	2	M	Health	N	N	N	Desk-top
3.2.4	If the SCA and NSW Health cannot agree on a list of Health Related Water Quality Characteristics, the views of NSW Health will prevail and the SCA must accept the list of Health Related Water Quality Characteristics determined by NSW Health.	N/A	3	2	M	Health	N	N	N	Desk-top
3.3	Obligations under 2000 Operating Licence	FULL	5	2	H	Health	N	Y	Y	NR
3.4	Water Supplied for Water Treatment									
(a)	In relation to the supply of Bulk Raw water by the SCA to Customers for water treatment, the SCA must comply with the following provisions: (a) the concentration or level of the Health Related Water Quality Characteristics must not exceed the health guideline values in the Australian Drinking Water Guidelines 2004 for those characteristics;	N/A	5	2	H	Health	N	Y	N	Audit
(b)	where necessary, the SCA must liaise, cooperate and where possible agree on cost-effective strategies (and the timing of their implementation) with Customers to ensure treated water consumed by humans is not harmful to human health.	FULL	3	2	M	-	SWC/ CUSTOMERS	Y	Y	Audit
3.5	Catchment and System Management									
	The SCA must comply with the Australian Drinking Water Guidelines 2004 relating to the management of the Catchment Area and the Catchment Infrastructure Works.	FULL	5	2	H	N	N	Y	Y	Audit
3.6	Water quality monitoring and reporting									
3.6.1	The SCA must maintain a water quality monitoring program (Monitoring Program) that comprises	N/A	3	2	M	Health	N	Y	Y	Audit
3.6.1(a)	routine monitoring of the quality of Bulk Raw Water supplied to Customers for Water Treatment:(i) for the Specific Water Characteristics; and (ii) for the concentration or level of the Health Related Water Quality Characteristics against the health guideline values in the Australian Drinking Water Guidelines 2004 for those characteristics; and	N/A								merge
3.6.1(b)	targeted, investigative and event based monitoring of the water in the Catchment Area and the SCA's Water Storages, to monitor occurrence of particular characteristics and contaminants in water.	N/A								merge
3.6.2	The Monitoring Program must include at least the following in relation to the routine monitoring required under clause 3.6.1(a):	N/A	3	2	M	Health	N	Y	Y	Audit
3.6.2(a)	monitoring for the Specific Water Characteristics									merge
3.6.2(b)	monitoring for the concentration or level of the Health Related Water Quality Characteristics against the health guideline values in the Australian Drinking Water Guidelines 2004 for those characteristics;									merge
3.6.2(c)	monitoring for any other characteristics of water nominated by NSW Health									merge

3.6.2(d)	an effective system of quality assurance in the monitoring, sampling, testing and reporting processes it employs, which must be to the satisfaction of NSW Health									merge
3.6.2(e)	sampling frequencies and locations that produce results which are representative of the quality of Bulk Raw Water supplied to Customers for Water Treatment and are based on outcomes of a risk assessment process.									merge
3.6.3	The SCA must provide:	FULL	3	2	M	Health	N	N	N	Desktop
3.6.3(a)	the results of the routine monitoring required under clauses 3.6.2(a), 3.6.2(b) and 3.6.2(c) to the Customers that it supplies Bulk Raw Water for Water Treatment, as soon as practicable;	FULL								merge
3.6.3(b)	the results of the routine monitoring required under clauses 3.6.2(b) and 3.6.2(c) to NSW Health, as soon as practicable.	FULL								merge
3.6.4	The Monitoring Program must include at least the following in relation to the targeted, investigative and event based monitoring required under clause 3.6.1(b):	FULL	3	2	M	Health/ DNR	N	Y	Y	Desktop
3.6.4(a)	an effective system of quality assurance in the monitoring, sampling, testing and reporting processes, which must be to the satisfaction of NSW Health and DNR;									
3.6.4(b)	sampling frequencies and locations that produce information to better define the occurrence and factors contributing to the presence of the characteristics in the water, which must be to the satisfaction of NSW Health and DNR.									
3.6.5	Within 18 months from the Commencement Date, the SCA must develop, to the satisfaction of IPART, a strategy and timeframe to further improve its Monitoring Program. Improvements to the Monitoring Program may include such elements as capability to capture real-time information on water quality and water quantity variables specified by NSW Health and DNR. The SCA must comply with that strategy and timeframe.	N/A	4	2	H	Health/ DNR	N	Y	Y	Single Audit required 07/08 period only
3.6.6	The SCA must maintain a database or databases of monitoring results for the routine, targeted, investigative and event based monitoring.	FULL	3	2	M	Health	N	N	Y	Desk-top
3.6.7	The nature, features and results of the Monitoring Program must be provided to IPART by 30 November each year for the previous financial year.	N/A	3	2	M	Health	N	N	Y	Audit
3.6.8	The information provided must, in addition to the information required under clause 3.6.3, also contain the following	N/A	3	2	M	Health	N	N	Y	Audit
3.6.8(a)	a summary of the monitoring information of the SCA									merge
3.6.8(b)	a summary of water quality information									merge
3.6.8(c)	information on the extent of compliance and non compliance by the SCA for the period reported									merge
3.6.8(d)	information on the integrity of the data reported									merge
3.6.8(e)	a summary of water quality incidents identified during the period reported and actions taken to resolve, eliminate or mitigate the effect of those incidents									merge
3.6.8(f)	steps taken by the SCA to protect public health as a result of an incident									merge
3.6.9	IPART must consider the information provided under clause 3.6.8 as part of the Annual Audit	N/A								NR

3.6.10	The SCA must provide IPART with a report (to the satisfaction of IPART), by 30 November 2007 and 30 November 2009, which analyses trends in water quality	N/A	3	2	M	Health/ DNR	N	N	N	Audit 07/08 and 09/10 periods only
3.6.10(a)	at the inflows to the water filtration plants,									merge
3.6.10(b)	within the SCA's Water Storages									merge
3.6.10(c)	at other locations as specified by NSW Health and DNR (including inflows into the SCA's Water Storages).									merge
3.6.11	The information provided to IPART under clause 3.6.10 must be made available to the public, free of charge.	N/A	2	2	L		N	N	N	Audit
3.7	Water Quality Planning - Water Quality Management Framework									
3.7.1	Within 12 months from the Commencement Date, the SCA must implement, to the satisfaction of IPART and NSW Health, a water quality management framework for water quality management in the Catchment Area and SCA's Water Storages (Water Quality Management Framework).	N/A	5	2	H	Health	N	Y	Y	Audit 06/07 period only
3.7.2	The purpose of the Water Quality Management Framework is to	N/A	5	2	H	Health	N	Y	Y	Audit 06/07 period only
3.7.2(a)	identify, assess and quantify hazards and risks to Bulk Raw Water quality									merge
3.7.2(b)	identify, evaluate, implement and monitor controls to be used in dealing with these hazards and risks									merge
3.7.2(c)	enable prioritisation of actions, research and water quality monitoring									merge
3.7.3	In order to achieve the purpose set out in clause 3.7.2, the Water Quality Management Framework must	N/A	5	3	H	Health	N	Y	Y	Audit 06/07 period only
3.7.3(a)	incorporate all elements of the 'Drinking Water Quality Management Framework', presented in the Australian Drinking Water Guidelines 2004									merge
3.7.3(b)	identify and assess pollution sources in the Catchment Area including how pollutants are modified between the source and the SCA's Water Storages;									merge
3.7.3(c)	evaluate the potential impact of pollution identified in clause 3.7.3(b) on the quality of Bulk Raw Water supplied to Customers (as this information becomes available through the SCA's long term research);									merge
3.7.3(d)	identify opportunities where modification of the operation of Catchment Infrastructure Works should result in improved water quality outcomes									merge
3.7.3(e)	review, prioritise and specify the actions in strategic planning, catchment management, storage management and delivery management with clear timeframes to protect or improve the quality of Bulk Raw Water supplied to Customers, taking into account, at least, the work undertaken in clauses 3.7.3(c) and 3.7.3(d);									merge
3.7.3(f)	implement the prioritised actions in clause 3.7.3(e) and evaluate results of monitoring at the inflows to the water filtration plants, in the SCA's Water Storages, inflows into the SCA's Water Storages and other key points to validate the impacts of the implemented actions on Bulk Raw Water quality;									merge
3.7.3(g)	as part of the Annual Audit process, provide information on those prioritised actions in clause 3.7.3(f) undertaken in strategic planning, catchment management, storage management and delivery management and the outcomes of those actions on water quality at the key monitoring points									merge
3.7.3(h)	re-prioritise the actions in clause 3.7.3(e) based on the information provided under clause 3.7.3(g).									merge

3.7.4	In developing the Water Quality Management Framework, the SCA must	N/A	5	3	H	Health	N	Y	Y	Audit 06/07 period only
3.7.4(a)	apply Australian Standard Risk Management: AS/NZS4360:2004 to the quality of Bulk Raw Water supplied by the SCA to its Customers;									merge
3.7.4(b)	apply Australian Standard Risk Management: AS/NZS4360:2004 to develop risk action plans;									merge
3.7.4(c)	consider the benefits and costs of different management options									merge
3.7.5	The SCA must engage in Public Consultation in developing the Water Quality Management Framework, and must specifically seek comments from IPART, NSW Health, DEC and DNR	N/A	4(P)	2	H	Health/ DECC / DNR	N	N	Y	Audit 06/07 period only
3.7.6	After the Water Quality Management Framework has been developed, the purpose, scope and reporting of the Water Quality Management Framework may only be amended following consultation with IPART, NSW Health, DEC and DNR	N/A	3(P)	1	L	Health/ DECC / DNR	N	N	N	Desk-top
3.7.7	The SCA must maintain, to the satisfaction of NSW Health, an incident management plan (Incident Management Plan), for the purpose of minimising the risk to human health from the Bulk Raw Water supplied by the SCA to Customers.	FULL	5	1	H	Health	N	Y	Y	Desk-top
3.7.8	The Incident Management Plan must remain in place until any new plan is developed in agreement with NSW Health and must form part of the Water Quality Management Framework	Full	3	1	M	Health	N	N	N	Desk-top
3.7.9	During the term of the Licence, the SCA must consult with Customers to whom it supplies Bulk Raw Water for Water Treatment and NSW Health in relation to the adequacy of the Incident Management Plan and update that plan as required.	N/A	3	2	M	Health	N	Y	Y	Desk-top
3.7.10	The Incident Management Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of water incidents including media and stakeholder liaison and any notification of public health advice received from NSW Health to Customers	FULL	5	1	H	Health	N	Y	Y	Desk-top
3.7.11	The Incident Management Plan must include a requirement for the SCA to advise NSW Health and the Customers to whom it supplies Bulk Raw Water for Water Treatment, if the Bulk Raw Water it supplies may be a risk to human health.	FULL	5	2	H	Health	N	Y	Y	Desk-top
3.8	Environmental water quality									
	The SCA must meet any environmental water quality requirements for any discharge water releases required under licenses issues to the SCA by DEC or DNR	N/A	3	2	M	DECC / DNR	N	N	N	Audit
4	CATCHMENT MANAGEMENT AND PROTECTION									
4.1	SCA to Manage and Protect Catchemnt Areas									

4.1.1	The SCA must manage and protect the Catchment Area consistent with its objectives and Functions under the Act.	N/A	5	2	H	N	N	Y	Y	Audit
4.1.2	By 30 November each year, the SCA must provide information to IPART on its catchment management and protection activities for the previous financial year, to enable IPART to consider the matter as part of the Annual Audit.	N/A	3	2	M	N	N	Y	Y	Audit
4.1.3	The information provided must:	N/A			M					Audit
4.1.3(a)	for each catchment management and protection activity or program, be in a format and content to be agreed between the SCA and IPART, and include the following: (i) the planned and actual catchment management and protection activities; (ii) the planned and actual expenditure for each of the activities in clause 4.1.3(a)(i); and (iii) the planned and actual outcomes for each of the activities in clause 4.1.3(a)(i);		3	2	M	N	N	N	Y	Audit
4.1.3(b)	identify program activities which responded to the recommendations or findings of the Annual Audit, Catchment Audit, or the SCA's research or monitoring programs;		3	3	M	N	N	Y	Y	Audit
4.1.3(c)	explain any annual changes in catchment management and protection activities or programs and expenditure;		3	3	M	N	N	Y	Y	Audit
4.1.3(d)	include the SCA's compliance with any Plan of Management		3	3	M	N	N	Y	Y	Audit
4.2	Plans of Management - Special Areas									
4.2.1	The SCA must give effect to any Plan of Management. In doing so, the SCA must consult, and where possible, collaborate with the National Parks and Wildlife Service of the DEC.	FULL	4	2	H	DECC	N	N	Y	Audit
4.2.2	The SCA must review any Plan of Management with the National Parks and Wildlife Service of the DEC at least once every five years.	FULL	3	2	M	DECC	N	N	N	Audit
4.3	Regional Environmental Plan									
4.3.1	The SCA must comply with any obligations imposed on it under the Regional Environmental Plan, applicable to its Functions under the Act and the Licence.	N/A	3	2	M	DoP	N	N	Y	Audit
4.3.2	The SCA must promote implementation and awareness of the Regional Environmental Plan including education of public authorities and other relevant parties in the Catchment Area.	FULL	3	2	M	DoP	N	N	Y	Audit
4.3.3	The SCA must provide information to IPART, by 1 September each year for the previous financial year, on its compliance with the Regional Environmental Plan.	N/A	3	1	M	DoP	N	N	N	Audit
4.4	State Environmental Planning Policy									
	The SCA must comply with any of its obligations imposed on it under the State Environmental Planning Policy 58, applicable to its Functions under the Act.	HIGH	3	2	M	DoP	N	Y	N	Audit
4.5	Provision of Information									
	The SCA must use its best endeavors to publish on its website and keep up-to-date the following:	FULL	2	2	L		N	N	N	Desktop
(a)	a list of information on water quality relevant to the Catchment Area collected by the SCA or other relevant persons or bodies and provide links to that information or advice on how that information can be accessed by the public;									merge

(b)	a list of the SCA's unpublished river health data and provide advice on how that information can be accessed by the public;									merge
(c)	each week, information on water transfers from the Shoalhaven Scheme, including:(i) actual and projected weekly volumes of water transferred from the Shoalhaven Scheme to Warragamba Dam or Nepean Dam; and (ii) cumulative week to week totals of water transferred over the course of the applicable financial year.									merge
5 5.1	THE ENVIRONMENT Environment Plan									
5.1.1	The SCA must prepare a draft five-year environment plan (Environment Plan) by 30 April 2006, and a final Environment Plan by 1 September 2006. The final Environment Plan must be made available to the public.	FULL/ N/A	2	1	L	N	N	Y	Y	Audit 06/07 only
5.1.2	The SCA must engage in Public Consultation in developing the Environment Plan.	FULL	2	1	L	N	N	N	Y	Desktop
5.1.3	The Environment Plan must:	N/A	2	2	L	N	N	Y	Y	Desktop
5.1.3(a)	contain details of the SCA's environmental management and programs to manage and minimise the environmental impacts from its activities, such as energy and water consumption, greenhouse emissions, waste and cultural heritage;									merge
5.1.3(b)	comply with principles of ecologically sustainable development;									merge
5.1.3(c)	be recognised in the SCA's business plans									merge
5.1.3(d)	incorporate environmental improvement targets and timetables for the SCA to achieve over the term of the Environment Plan.									merge
5.1.4	The SCA must review, and if necessary update, the Environment Plan at least once during the term of the Licence. In conducting that review, the SCA must consult with DNR, DEC, Department of Primary Industries, IPART and peak environmental non-government organisations for the purpose of considering their views and seeking their comments on whether any amendments to the Environment Plan are required		2	1	L	N	N	Y	Y	Desktop
5.1.5	By 1 September each year, the SCA must provide information to IPART on its progress for the previous financial year in meeting the Environment Plan. The information must include the SCA's compliance with the targets and timetables in clause 5.1.3.	Full to medium	2	1	L	N	N	Y	Y	Desktop
5.2	Catchment and Environmental Performance Indicators									
5.2.1	The SCA must monitor, record, compile data and provide information on the Catchment and Environmental Performance Indicators for the immediately preceding financial year or otherwise in accordance with the reporting frequency indicated in Schedule 2.	N/A	3	1	M	N	Y	Y	Y	Audit
5.2.2	By 30 November each year, the SCA must provide information on its performance, for the previous financial year or otherwise in accordance with the reporting frequency indicated in Schedule 2, against the Catchment and Environmental Performance Indicators.	N/A	2	1	L	N	N	N	Y	Audit
5.2.3	The information referred to in clause 5.2.2:	N/A	3	2	M	N	N	N	Y	Audit
5.2.3(a)	must be provided, where such data is available, in relation to each sub-catchment in the Catchment Area									merge

5.2.3(b)	must be provided in a manner which enables a financial year to financial year comparison in relation to the SCA's performance against the Catchment and Environmental Performance Indicators and, in particular, where such data is available, a comparison with historical annual values over at least the previous 12 financial years;									merge
5.2.3(c)	must be accompanied by an analysis of trends in the data (including possible causes or actions proposed in response to any improvement or deterioration in performance).									merge
6	MANAGEMENT OF CATCHMENT INFRASTRUCTURE									
6.1	Management of Catchment Infrastructure									
6.1.1	The SCA must manage and operate the Catchment Infrastructure Works to minimise risk to human health from the Bulk Raw Water it supplies.	FULL	5	1	H	N	N	Y	Y	Audit
6.1.2	The SCA must ensure that the Catchment Infrastructure Works is operated and managed consistent with the Design Criteria.	FULL	4	2	H	N	N	Y	Y	Audit
6.2	Management of Catchment Infrastructure Works									
6.2.1	Within 12 months of the Commencement Date, the SCA must provide IPART with a report on:	N/A	3	2	M	N	N	Y	Y	Audit 06/07 only
6.2.1(a)	the current estimate of the Water Supply System Yield;									merge
6.2.1(b)	the assumptions and inputs, including the Design Criteria used in the model to calculate that Water Supply System Yield;									merge
6.2.1(c)	the reasons underlying any material changes to the Design Criteria, the Water Supply System Yield or other assumptions and inputs									merge
6.2.2	The SCA must provide the Minister with a copy of the report required under clause 6.2.1, prior to reporting to IPART.	N/A	3	1	M	N	N	N	N	Audit
6.2.3	As soon as practicable after reporting to IPART as required under clause 6.2.1, the SCA must make the report publicly available.	N/A	3	1	M	N	N	N	N	Audit
6.2.4	The SCA must re-calculate the Water Supply System Yield on the occurrence of any one or more of the following events:	N/A	5	2	H	N	N	Y	Y	Audit
6.2.4(a)	the conclusion of any drought event;									merge
6.2.4(b)	the commencement of any major modification or augmentation to the Catchment Infrastructure Works or the Water Supply System Infrastructure which will have a significant impact on the SCA's supply of water;									merge
6.2.4(c)	any material change to the operating rules of the Catchment Infrastructure Works (including Design Criteria).									merge
6.2.5	The SCA must advise the Minister of any changes to the Water Supply System Yield from the previous Water Supply System Yield following a re-calculation under clause 6.2.4.	N/A	3	1	M	N	N	N	N	Audit
6.2.6	The SCA must make any changes to the Water Supply System Yield available to the public, including reasons for the changes to the Water Supply System Yield, as soon as practicable after advising the Minister of those changes in clause 6.2.5.	N/A	3	1	M	N	N	N	N	Audit
6.3	Review of the Model									
6.3.1	At least once during the term of the Licence, the SCA must obtain an independent expert to review its model and procedure for calculation of the Water Supply System Yield and to test:	N/A	5	2	H	N	Y	Y	Y	Desktop
6.3.1(a)	the robustness of the model;									
6.3.1(b)	the key assumptions used in the model;									
6.3.1(c)	the process for calculating the yield, including the appropriate frequency of yield calculation and the appropriateness of the trigger events in clause 6.2.4.									

6.3.2	The independent expert must advise the SCA on whether the Water Supply System Yield should be re-calculated, based on the findings of the test in clause 6.3.1.	N/A	5	2	H	N	Y	Y	Y	Desktop
6.3.3	During the independent expert's review under clause 6.3.1, the SCA must consult with DNR, DEC, Sydney Water Corporation and any other persons reasonably expected to have an interest in the review of the model.	N/A	5	2	H	DNR, DECC , SWC.	Y	Y	Y	Desktop
6.3.4	The SCA must make the findings of the independent expert's review and its response to those findings available to the public.	N/A	3	2	M	N	N	N	N	Desktop
6.4	Water Conservation									
6.4.1	The SCA must undertake practicable actions to conserve water and minimse water losses, which may include working collaboratively with its customers.	N/A	3	2	M	N	N	Y	Y	Desktop
6.4.2	The SCA must provide information to IPART, by 1 September each year for the previous financial year, on:	FULL to Non	3	2	M	N	N	N	N	Desktop
6.4.2(a)	any demand management and supply augmentation activities undertaken by the SCA, including any obligations under any licence or approval under the Water Act 1912 or the Water Management Act 2000 and the Metropolitan Water Plan;									merge
6.4.2(b)	the water balance as per the methodology set out in the report by Sinclair Knight Merz entitled, "Sydney Catchment Authority Operating Licence – Water Balance Template (October 2005)" for the Catchment Infrastructure Works and for each of the following water supply systems (i) Warragamba; (ii) Woronora; (iii) Blue Mountains; (iv) Shoalhaven; and (v) Upper Nepean									merge
6.4.2(c)	actions undertaken to manage leakage and losses from its Catchment Infrastructure Works, including actions and compliance with timeframes under the report prepared under clause 6.4.3, and actual expenditure on managing water leakage and loss activities and estimated water savings as a result of those activities.									merge
6.4.3	Within 12 months from the Commencement Date, the SCA must produce a report which recommends appropriate actions and timeframes for the SCA to manage leakage and losses, and make that report available to the public. That report must take into account and state how it has taken into account the following:(a) the economic level of leakage; (b) technical feasibility; (c) environmental, economic and social factors; (d) previous studies on leakage and losses; and (e) the estimated measurable impacts on water loss from mining activities on the Catchment Area.	N/A	3	2	M	N	N	Y	Y	Audit 06/07 period only
7	ASSESSMENT MANAGEMENT									
7.1	Assessment Management Obligation									

	The SCA must ensure that its Assets are managed consistent with:(a) its obligations in the Licence, and all applicable laws, policies and guidelines with which the SCA must comply, including the requirements of the NSW Dams Safety Committee; (b) the principles of the Strategic Management Framework and the Total Asset Management Policy; (c) subject to clause 7.1(a), the lowest life cycle cost and acceptable risk of the Assets; (d) the whole life of the Assets; and (e) its assessment of the risk of loss of the Assets, and capacity to respond to a potential failure or reduced performance of the Assets.	Not assessed	5	2	H		N	Y	Y	Audit to correspond with price review of 2008.
7.2	Reporting on the Management System of the Assets									
7.2.1	At least once during the term of the Licence at a time agreed with IPART, the SCA must provide information to IPART on the state of each group of Assets managed by the SCA.	Not assessed	3	2	M		N	Y	Y	Audit to correspond with price review of 2008.
7.2.2	The information provided must include the following: (a) a description of the processes, practices, systems and plans the SCA uses in managing the Assets; (b) a description of each group of Assets; (c) an assessment of the expected capability of the Assets to deliver the services required to be delivered by the SCA and meet the existing obligations of the SCA consistent with the Licence and all applicable laws with which the SCA must comply; (d) an assessment of the major issues or constraints on current and future performance of the Assets; (e) the strategies and expected costs of future investments in the Assets; (f) progress in implementing the management of the SCA's Assets and any recommended improvements in processes, practices, systems and plans for the management of the Assets; and (g) such other information reasonably required by IPART.	N/A								
7.3	Auditing the Management System of the Assets									
7.3.1	At least once during the Licence, IPART may (at a time it determines) conduct an audit of SCA's compliance with clauses 7.1 and 7.2. The audit may form part of an Annual Audit or be conducted separately from an Annual Audit, at the discretion of IPART.	N/A								Audit to correspond with price review of 2008.
7.3.2	In addition, IPART may at any time audit the SCA's compliance with clauses 7.1 and 7.2 for the purpose of:	N/A								
7.3.2(a)	investigating and reporting on, or reviewing the pricing of SCA's bulk water services under the Independent Pricing and Regulatory Tribunal Act 1992;	N/A								
7.3.2(b)	investigating compliance by SCA with specific areas of its Asset management	N/A								
7.3.3	An audit undertaken under clause 7.3.1 or 7.3.2, must comply with the scope and audit specifications determined by IPART.	N/A								
7.3.4	The provisions of Part 11 apply to an audit under clause 7.3 as if the audit under clause 7.3 is an Annual Audit	N/A								
7.3.5	IPART must advise the Minister of its decision to conduct an audit under clause 7.3.1 or 7.3.2 and, subsequent to the audit, provide the Minister with a report on the outcomes of the audit.	N/A								
8	CUSTOMERS									

8.1	Customer - Sydney Water Corporation									
	The SCA acknowledges that it has entered into a bulk water agreement	Full	4	1	M	N	N	N	N	Desktop
8.2	Customers - Other than Sydney Water Corporation									
8.2.1	Subject to clause 8.2.3, the SCA must establish terms and conditions of supply which are to apply to all its Customers (other than Sydney Water Corporation) for the supply of Bulk Raw Water to those Customers. The terms and conditions of supply must include at least, the terms and conditions in clause 8.2.2.	HIGH	3	2	M	N	N	N	Y	Desktop
8.2.2	The terms and conditions of supply must at a minimum include	Full	3	2	M	N	N	N	Y	Desktop
8.2.2(a)	the standard of the quality of the water supplied;									
8.2.2(b)	the continuity of water supplied;									
8.2.2(c)	the costs to be paid by those Customers for the supply of water to them;									
8.2.2(d)	dispute resolution and complaint handling procedures (not inconsistent with the procedures in clause 8.3).									
8.2.3	If a Customer does not agree to the terms and conditions of supply referred to in clause 8.2.1, that Customer may request (but the SCA does not have to comply with that request) that the SCA enter into other agreements for the supply of Bulk Raw Water on such terms and conditions as may be negotiated between the SCA and that Customer, subject to those agreements complying with clause 8.2.2.		3	2	L	N	N	N	Y	Desktop
8.2.4	The SCA must advise the Customers in clause 8.2.1 and clause 8.2.3 of the potential uses for the Bulk Raw Water it supplies and of the need for Water Treatment if the water is to be used for human consumption	MEDIUM	3	2	M	N	N	N	N	Desktop
8.3	Complaints									
8.3.1	The SCA must establish internal complaints handling procedures for receiving, responding to and resolving Complaints it receives, which relate to any of its Functions, from Customers and the community.	FULL	2	2	M	N	N	N	Y	Desktop
8.3.2	The internal complaints handling procedures of the SCA must be based on the Australian Standard AS4269-1995 Complaint Handling.	FULL	2	2	L	N	N	N	Y	Desktop
8.3.3	The SCA must make available to Customers and the community information concerning its internal complaints handling procedures which explains how to make a Complaint and how the complaints handling procedure works.	FULL	2	2	L	N	N	N	N	Desktop
8.3.4	The SCA must provide information of the nature described in clause 8.3.3 to Customers at least once every two years. The SCA must also make this information available to the public free of charge.	FULL	2	2	L	N	N	N	N	Desktop
8.3.5	The SCA must provide information, by 1 September each year for the preceding financial year, to IPART on the following details concerning complaints made against the SCA:	MEDIUM	2	3	M	N	N	N	Y	Desktop
8.3.5(a)	the number and types of complaints received;									merge
8.3.5(b)	the number and type of complaints resolved or not resolved in sufficient detail and using sufficient classifications to enable IPART to gain a reasonable understanding of how and how well those complaints were resolved or why those complaints were not resolved, as the case may be									merge
8.3.5(c)	where the SCA has received 20 or more complaints on a similar or related problem or issue, details of that problem or issue.									merge
8.4	Consultation									
8.4.1	The SCA must regularly engage in Consultation with Customers and the community on issues relevant to the performance of the SCA's obligations under this Licence.	FULL	2	2	L	N	N	N	Y	Desktop

8.4.2	The SCA must, by 1 September each year for the preceding financial year, provide information on its Consultation activities under clause 8.4.1. The information provided by the SCA must include a description of:	FULL	2	2	L	N	N	N	Y	Desktop
8.4.2(a)	the issues upon which the SCA consulted with the Customers and/or the community;									merge
8.4.2(b)	the mode of Consultation used;									merge
8.4.2(c)	any response made by the SCA as a result of feedback received as part of the Consultation									merge
8.4.2(d)	the number of Customers or community members consulted and a description of the organisations and interests represented (if applicable).									merge
8.4.3	As part of the End of Term Review, the Licence Review Body must evaluate the effectiveness of the SCA's Consultation under clause 8.4.1.									merge
11 11.1 11.2	ANNUAL AUDIT OF THE LICENCE Commission of Audits What the Audit is to report on									
11.2.1	IPART or the person undertaking the Annual Audit may investigate and prepare a report on any or all of the following:									
11.2.1(a)	compliance by the SCA with its obligations in each of Parts 3, 4, 5, 6, 7, 8 and 9;									See above
11.2.1(b)	the SCA's compliance with its obligations under each Memorandum of Understanding referred to in clause 2.3;	Not assessed	3	2	M	Y	N	N	Y	Desktop
11.2.1(c)	any other matter required by the Licence, the Act or administrative direction to be assessed and considered as part of the Annual Audit.									

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Document Status

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2	M Pignatelli	I Garrard				13/08/ 07
3	M Pignatelli	I Garrard		M Pignatelli		31/08/ 07

Appendix F

Comments from Government Agencies

NSW Government
DEPARTMENT OF WATER & ENERGY
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Our ref: DGC07/572
Your ref: 21/16261/134441
File: DWE 2006_2007 Operational Audit comments.doc

Ms Michelle Larkin
GHD Audit Coordinator
GHD Pty Ltd
10 Bond Street
SYDNEY NSW 2000

12 December 2007

Dear Ms Larkin

Subject: Operational Audit of the Sydney Water Corporation 2006/07

I refer to your letter dated 20 September 2007 inviting comments from the Department of Water and Energy (DWE) on the audit of Sydney Water Corporation's (SWC) Operating Licence for the period 1 July 2006 to 30 June 2007.

The Department has reviewed the Operating Licence in consideration of the attachment to your letter and makes the following specific comments:

Clause 2.3.1 & 2.3.2 (C) – Memorandum of Understanding

The original Memorandum of Understanding between DNR and SWC was developed in 1996. The document was revised in 2002 and again in 2007 to reflect modifications to the legislation administered by or governing these parties and to capture increased interaction between SWC and DNR. The document requires minor modifications to reflect the department's name change to the Department of Water and Energy (DWE) and the change in responsibilities.

Clause 3.6 – Other Grades of Water

The clause 3.6.1 should be amended to reflect the change in name from DIPNR to DWE.

SWC's Annual Report (ie the Environment Plan 2005-2010 Progress Report contained in Section 5 of the Appendix to the Annual Report) does not include any reference to the quality of recycled water from Rouse Hill and other recycled water schemes. Quality of the recycled water should be reported in the annual report. The recycled water quality data should be analysed to assess the performance of the scheme/s and to increase public confidence in the water being supplied. **This issue was also raised in the DNR response to last year's Operational Audit of SWC.**

Clause 7.2 – Environment Management

It is noted that a new SWC Environment Plan 2007-2012 has been released. DNR has not been consulted on the development of the new Plan during the 2006/07 audit period.

The Department is of the opinion that more meaningful comments on Sydney Water's performance in meeting the requirements of the operating licence can be provided if the audit is carried out following the publication of Sydney Waters' annual environment report. Without the

availability of annual report, the department has very little information to assess or comment on the performance of Sydney Water.

Should you have any further enquiries about this matter please contact Mr John Galea on telephone (02) 4729 8122 or email john.galea@dnr.nsw.gov.au .

Yours sincerely

Salim Vhora
Manager Corporate Licensing Unit
Compliance and Licensing

DRAFT

Ms Michelle Larkin
Audit Coordinator
GHD Pty Ltd
10 Bond St
SYDNEY NSW 2000

Dear Ms Larkin

I refer to your letter to the Chief Health Officer, Dr Denise Robinson, regarding the audit of the Sydney Water Corporation Operating Licence. Dr Robinson has asked that I respond on her behalf.

Sydney Water is implementing the *Five-Year Drinking Water Quality Management Plan* 2005-2010. This document provides a sound template for the implementation of the *Australian Drinking Water Guidelines* 2004 and the *Framework for the Management of Drinking Water Quality*. The NSW Department of Health is very satisfied with Sydney Water's Annual Report on implementation of the Five Year Plan 2006-2007.

Sydney Water has investigated a number of detections of indicator bacteria and other organisms. These events were very infrequent and do not present a risk to public health. The Annual Report identifies improvements that have or will be implemented to ensure good drinking water quality.

In January 2007 Sydney Water responded effectively to taste and odour complaints in the Illawarra system. This event did not present a risk to public health and was caused by taste and odour compounds originating in the catchment. Following the event Sydney Water consulted the Department and commenced a project to assess the ability of filtration plants to remove algae and taste and odour compounds.

In June 2007, Sydney Water worked effectively with Sydney Catchment Authority to manage high turbidity that entered Warragamba Dam as a result of heavy rains. Water filtration plants performed well and met targets for turbidity and disinfection throughout the incident.

Sydney Water has been working with the Department on developing a Recycled Water Quality Management Plan to facilitate the implementation of the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)* 2006 for all new recycled water schemes.

The Department meets regularly with Sydney Water at officer and strategic levels. In conclusion, the Department is satisfied that Sydney Water has met its public health obligations under the Operating Licence and Memorandum of Understanding. Officers of the Department would be happy to meet with the auditors if required. For further information, please contact Dr Paul Byleveld on 9816 0589.

Yours sincerely

Dr Wayne Smith
Director Environmental Health

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
1						
2						
Final						

C IPART's Review of Obligations Not Subject to Audit

Table C.1 IPART's review of Sydney Water's Operating Licence – obligations not subject to audit

Licence Clause	Requirement	Compliance Certified	Evidence
3	Water Quality		
3.2	Drinking Water Quality – Monitoring		
3.2.1	SWC must prepare, to the satisfaction of NSW Health, a comprehensive annual Drinking water quality monitoring plan for the water supply by 31 March each year, and must: (a) Includes system performance monitoring and regular sampling, laboratory testing and processes to ensure quality control; (b) Have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply those concepts in the manner, form and timeframes specified by NSW Health; (c) Include the monitoring of Health guideline values; (d) Include the monitoring of Aesthetic guideline values; (e) Assess the quality of water in Sydney Water's water supply system; and (f) Be undertaken for the period from the Commencement Date to 30 June 2006 and after that for each subsequent financial year.	Yes	Sydney Water advised in the 1 September 2007 report that the Drinking Water Quality Monitoring Plan was submitted to NSW Health on 27/02/07; comments on the Plan were received from NSW Health on 29/02/07 stating that it was generally satisfied that the Plan meets requirements of the MoU and the Operating Licence. The final 2007/08 monitoring program was signed by Sydney Water and submitted on 31/03/07. NSW Health signed the Plan on 30/05/07.
3.2.2	The sampling frequency and the locations chosen for the monitoring should be such that the results are representative of the quality of water supplied to Consumers.	Yes	Sydney Water advised in the 1 September 2007 report that the sampling frequencies and locations chosen for monitoring are generally in keeping with recommendations in the ADWG 2004; the sampling regime meets or exceeds the minimum number of samples specified in the ADWG for each water delivery system. The sample sites within each reservoir zone and delivery system are reviewed annually as part of the review of the monitoring plan.

Licence Clause	Requirement	Compliance Certified	Evidence
3.5	Drinking Water – Incident Management		
3.5.1	Sydney Water must immediately report to NSW Health any information or event in the delivery of the Services or in its systems or operations which may have risks for public health.	Yes	Sydney Water advised in the 1 September 2007 report that all information or events related to public health are reported to NSW Health; this system has been operating for several years and includes the Sydney Catchment Authority in the communication.
3.5.2	From the Commencement Date, Sydney Water must maintain the existing Drinking water quality incident management plan (Incident Plan) prepared to the satisfaction of NSW Health and that Incident Plan must remain in place until any new plan is developed in agreement with NSW Health.	Yes	Sydney Water advised in the 1 September 2007 report that the Incident Management Plan comprises the Emergency Response Handbook and the Water Quality Event Management SOP. NSW Health endorsed the revised Drinking Water Quality Incident Management Plan on 12/08/02. The Event Management SOP has been amended several times (most recently in Jan 2006) and has been endorsed by NSW Health each time.
3.5.3	The Incident Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of Drinking water incidents including media and stakeholder liaison and any notification to Consumers of public health advice received from NSW Health.	Yes	Sydney Water advised in the 1 September 2007 report that the Drinking Water Quality Incident Management Plan contains the required procedures.
3.5.4	In preparing the Incident Plan under clause 3.5.2, Sydney Water must have regard to the concepts of good practice set out in the Australian Drinking Water Guidelines 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.	Yes	Sydney Water advised in the 1 September 2007 report that the Drinking Water Quality Incident Management Plan contains the required procedures. This clause has been audited last year and Sydney Water has achieved full compliance.
4	Infrastructure Performance		
4.5	Reporting on system performance standards		
4.5.1	By no later than 1 September each year, Sydney Water must report to IPART on its compliance with the water pressure standard, the water continuity standard and the sewage overflow standard.	Yes	Sydney Water advised, in Section 3.1 of the 1 September 2007 report, that it achieved the required compliance.
4.5.2	By no later than 1 September each year, Sydney Water must report to IPART on the number of properties in the preceding financial year that experience the following: (a) a water pressure failure; (b) a Planned Water Interruption or an Unplanned Water Interruption;	Yes	Sydney Water had reported the number of properties affected in each category under this clause in Section 3.1 of the 1 September 2007 report, with notes on background information and/or to explain the derivation of results.

Licence Clause	Requirement	Compliance Certified	Evidence
	(c) an Uncontrolled Sewage Overflow.		
4.5.3	Sydney Water must maintain record systems sufficient to enable it to measure accurately its performance against the water pressure standard, the water continuity standard and the sewage overflow standard and to enable measurement and reporting by Sydney Water of those standards by delivery systems. Delivery system in this clause means the geographic classification used by Sydney Water for its own internal purposes, based on geographic regions forming part of the Services.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
4.5.4	Sydney Water must provide IPART with physical or electronic access to the records kept by Sydney Water that enable it to report under clause 4.5.1	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
4.6	Review of system performance standards		
4.6.4	Any amendments to the performance standards that must be adopted by Sydney Water under clause 4.6.3 must be incorporated into the Customer Contract as soon as reasonably possible and also considered as part of any review of the Customer Contract.	No requirement for amended standards.	IPART exhibited the final draft of its Review of System Performance Standards from December 2006 to January 2007. The review proposed slight variations for water continuity and sewage overflow standards with a new repeat event standard proposed for each. IPART recommended staged implementation process to mid-2008, whilst the pricing review was recently rescheduled for completion by mid-September 2007 for a four-year price path. Sydney Water is waiting for IPART to advise an alternative approach for the implementation phase where perhaps only cost neutral outcomes are considered for implementation.
4.7	Service quality and system performance indicators		
4.7.1	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 in Schedule 1.	Yes	Sydney Water advised in the 1 September 2007 report that it complies with this clause.
4.7.3	By 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART its performance against the service quality and system performance indicators in Schedule 1 for the immediately preceding financial year. The report must	Yes	Sydney Water had reported its performance against the service quality and system performance indicators in Schedule 1 in the 1 September 2007 report.

Licence Clause	Requirement	Compliance Certified	Evidence
	include an analysis of any problems of a systemic nature.		
4.7.4	As part of its report, Sydney Water must provide IPART with physical and electronic access to the records kept by Sydney Water that enable it to report under clause 4.7.3.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
4.11	**Water Leakage**		
4.11.1	Sydney Water must ensure that by 30 June 2009, the amount of Water leakage from its Drinking water supply system does not exceed 105 megalitres a day.	No requirement	Water leakage for 2006/07 was estimated to be 121.3ML/D. Sydney Water advises that the current year-on-year movement is not significant. Reliable trends require at least three years of trending for reducing the impact of errors inherent with this type of estimation. Sydney Water advised in the 1 September 2007 report that the level of leakage is determined quarterly and is based on the water balance methodology over a rolling 12-month period. In 2006/07 Sydney Water adopted the Water Services Association of Australia (WSAA) default value of 2 percent for customer meter under-registration. This adjusted the level of leakage as reported for 2005/06 from 123ML/d to 116.7ML/d.
4.11.3	On 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART on: (a) the economic level of Water leakage for the preceding financial year and how that level of Water leakage is calculated; and (b) its assessment of its progress towards compliance with clause 4.11.1	Yes	(a) Sydney Water calculated and provided to IPART its economic level of leakage; a key conclusion of this study is that the existing target of 105ML/d is within the updated long-run ELL range until 2009. It is estimated that achieving a leakage target of 105ML/d would result in an up to three-fold increase in leakage control cost, from the current figure of $7.4 million/annum to $23 million/annum over time. CSIRO completed a peer review of the Sydney Water ELL model in 2006 and concluded that the current analysis is the best possible in the present context and should be viewed as a platform to drive data improvement efforts. The 2007 assessment shows that the best estimate of the ELL based upon 38c/kL is 114ML/d. (b) Sydney Water advised in the 1 September 2007 report that its integrated leakage reduction strategy comprises active leakage deduction, pressure management and improvements to leakage monitoring and measurement aims to reduce leakage

Licence Clause	Requirement	Compliance Certified	Evidence
			to 105ML/d by 2009. The benefits of the Pressure Management Program should become increasingly evident over the next few years, however the reduction in losses are likely to be delivered later than originally planned. The calculation of real losses utilises quarterly average data over a year; therefore confirmation of the June 2009 target of 105ML/d will not be available until 12 months later (see Section 3.3 of Sydney Water's 1 September 2007 report). (c) Sydney Water advised in the 1 September 2007 report that the leakage program is currently under review and new initiatives have been identified to provide improved assurance that the 2009 target will be met. The new initiatives include additional active leak detection system and improved boundary management.
4.12	**Reports related to water leakage**		
4.12.2	Sydney Water must report to IPART no later than 1 September 2005 and at the same time in each subsequent year on the number of water pressure control zones in Sydney Water's Drinking water system that Sydney Water: (a) intends to complete in the current and subsequent financial years; and (b) had planned to complete in a financial year compared with the number actually completed in that financial year.	Yes	Sydney Water had reported to IPART on 1 September 2007 on the Water Pressure Control Zone installation program covering criteria listed in clause 4.12.2 (a) and (b) respectively. The report stipulated that, of the total of 14 schemes required by 30 June 2007, 12 were installed (and gave reasons for the delay); the two remaining schemes will be completed by the end of September 2007. The created Water Pressure Control Zones will enable water savings in the order of 2.94ML/d towards the 105ML/d leakage target for June 2009. Sydney Water advised on 26/09/07 (audit interview) that the two remaining schemes have been completed as predicted in the 1 September report brief to IPART on Operating Licence performance for 2006/07.
4.12.3	On 1 September 2005, and on 1 September of each subsequent year, Sydney Water must report to IPART on the number of bursts, breaks or leaks (in the trunk and reticulation component of Sydney Water's Drinking water system between water treatment plants and a Property) which occurred in the immediately preceding financial year and the time taken by it to repair those bursts,	Yes	Sydney Water had reported to IPART on 1 September 2007 on the water mains breaks, bursts and leaks and repair time in accordance to Operating Licence clause 4.12.3. Sydney Water responds to leaks reported by customers on an assessed priority. Sydney Water's Customer Contact Centre assigns the priority based on information provided by the caller. The

Licence Clause	Requirement	Compliance Certified	Evidence
	breaks or leaks.		priority system ranges from Priority 6 (most urgent) to Priority 1 (least urgent). Both the number of breaks and leaks and weighted average time to repair have improved in the period 1 July 2006 to 30 June 2007 compared to the corresponding period in 2005/06 (15,009 breaks and leaks in 2006/07 versus 15,508 in 2005/06, and 25.33 hours average repair time in 2006/07 compared to 34.5 hours in the previous year).
4.12.4	Sydney Water must report to IPART, no later than 1 September 2005 and at the same time in each subsequent year, on: (a) the number of kilometres of reticulation mains it inspected during the preceding financial year for Water leakage; and (b) its program during the preceding financial year for inspecting reservoir zones for Water leakage and for rehabilitating reservoir zones to prevent or correct Water leakage.	Yes	(a) Sydney Water inspected 18,080 km of reticulation water mains in 2006/07, exceeding the annual target of 18,000 km. (b) In 2006/07, Sydney Water inspected 82 supply zones for leakage. These zones were selected on the basis of leak history. Generally, zones with high leakage levels are inspected more often, with some being scanned more than once per year. All identified leaks are repaired as part of the Active Leak Detection Program.
4.14	**Priority Sewerage**		
4.14.1	Sydney Water must meet the following requirements in relation to the "Priority Sewerage Program": (a) By 30 June 2009 connection shall be made available to all lots eligible for connection under Stage 1 Priority Sewerage Program, excluding those lots in the area of Menangle/Menangle Park; (b) By 30 June 2006 Sydney Water must report to the Minister on how it intends to service the area of Menangle/Menangle Park; and (c) By 30 June 2009 work shall be commenced which, when completed, will permit connection to be made available to at least 30% of lots eligible for connection under Stage 2 Priority Sewerage Program and including those lots which are situated in areas adjacent to World heritage areas.	Yes	(a) Sydney Water provided updates in the 1 September 2007 report to IPART on the progress on PSP Stage 1, and reported that all projects in PSP Stage 1 are currently on track to meet the 30 June 2009 target as required by the Operating Licence. (b) In a letter dated 21 June 2006, Sydney Water advised the Minister on how it intends to service the area of Menangle and Menangle Park. The area will be serviced as part of the overall servicing for he proposed Menangle Park Urban Release Area. Delivery will coincide with the developer servicing of the Release Area. This is anticipated to occur in 2011/12. (c) Sydney Water Board approved $1.3 million for planning to commence in 2006/07 on the initial 4 schemes of PSP Stage 2. Progress for individual schemes was outlined in the 1 September 2007 report, and included the areas directly adjacent to the World Heritage listed Blue Mountains National Park. – Hawkesbury Heights and Yellow Rock Sewerage Scheme –

Licence Clause	Requirement	Compliance Certified	Evidence
			subject to timely planning (commenced in late 2006) and funding approval, the scheme will commence in early 2009. Connections will be made available from early 2010. – Glossodia, Freemans Reach and Wilberforce Sewerage Scheme – it is anticipated that construction of this scheme will commence in early 2009. Connections are envisaged to be available from 2011 and will in stages, becoming progressively available across the three towns. Commencing the two schemes above will satisfy the Operating Licence requirement of commencing work on 1,800 lots (30 per cent) by 30 June 2009. – Appin, Wilton and Douglas Park Sewerage Scheme – construction of the scheme for the villages will commence in mid 2011, with connections likely to be progressively made available from early 2013. – Agnes Banks and Londonderry Sewerage Scheme – scheduled to commence in early 2011, with connections available from early 2012.
4.14.2	Should Sydney Water incur delays caused by consent authorities that impair its ability to meet the above targets, Sydney Water is required to write to the Minister for Energy and Utilities, to advise the Minister of the reasons for the delay.	No requirement	Sydney Water reported in the 1 September 2007 report that there have been no planning consent delays of material significance that could impair Sydney Water's ability to meet Operating Licence targets fro PSP delivery.
4.14.3	On 1 September 2006 and at the same time in each subsequent year Sydney Water must report to IPART on its assessment of its progress towards compliance with clause 4.14.1 and the reasons which lead it to reasonably believe that (as at the date of its report) it will or will not be able to comply with clause 4.14.1.	Yes	See comments under Operating Licence clause 4.14.1 and 4.14.2.
5	Customer and consumer rights		
5.1	Customer Contract		
5.1.4	A copy of the Customer Contract and any variations to it must be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge.	Yes	Sydney Water advised that the Customer Contract is available form Sydney Water's offices and is posted on Sydney Water's website free of charge.

Licence Clause	Requirement	Compliance Certified	Evidence
5.1.7	Sydney Water must take all steps necessary to issue an amended Customer Contract that addresses those recommendations of the review report adopted by the Minister within 3 months of the Minister's adoption of the review report.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
5.1.9	The pamphlet prepared under clause 5.1.8 must be updated when changes are made to the Customer Contract under clause 5.1.7 and must be disseminated by Sydney Water free of charge to: (a) Customers, at least once annually with their quarterly or other bills; and (b) any other person on request.	Yes	Sydney Water reported in the 1 September report that a change has been made to the Customer Contract regarding pro rata billing and included with the Winter and Spring 2006 bill issue.
5.1.10	As provided by and subject to section 57 of the Act, Sydney Water may enter into other contracts or arrangements for the supply of Services. The terms of any such contract or arrangement are such as may be negotiated between Sydney Water and any such person.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
5.2	Consumers		
	Sydney Water must fulfil its obligations under the Customer Contract relating to complaint handling and complaint resolution procedures as if those obligations also extended to Consumers.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007. Sydney Water advised in the 1 September report that all complaints received by Sydney Water are recorded irrespective of whether they are from a customer or a consumer.
5.3	Code of practice and procedure on debt and disconnection		
5.3.1	Sydney Water must have in place a code of practice and procedure on debt and disconnection.	Yes	Sydney Water advised in the 1 September report that code of practice and procedure on debt and disconnection is in place.
5.3.2	The code of practice and procedure on debt and disconnection must provide for: (a) deferred payment or payment by instalment options for consumption bills; and (b) the payment options referred to in (a) to be advised in consumption bills.	Yes	Sydney Water advised in the 1 September report that the code of practice and procedure on debt and disconnection provides for deferment of payment including instalment options for consumption bills and that deferred payment options are available is shown on the customer's bill.
5.3.3	Sydney Water must include the code of practice and procedure on debt and disconnection in its Customer Contract.	Yes	Customer contract posted on Sydney Water website demonstrate compliance with Licence clause 5.3.3.

Licence Clause	Requirement	Compliance Certified	Evidence
5.3.4	Sydney Water must disseminate information on its code of practice and procedure on debt and disconnection free of charge to: (a) Customers, at least once annually with their quarterly or other bills; and (b) any other person on request.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
5.4	**Customer Councils**		
5.4.1	In accordance with the Act, Sydney Water must have in place and regularly consult with one or more customer councils to enable community involvement in issues relevant to the performance of Sydney Water's obligations under this Licence.	Yes	Sydney Water advised in the 1 September report that it operates the Corporate Customer Council. During this period, the Council provided advice and received information on a number of projects and strategies including the following: – Priority Sewerage Program – Western Sydney Recycled Water Initiative: Replacement Flows Project – Developer Charges – Sewerfix – wet weather overflow abatement – 2006 Metropolitan Water Plan – Communications with customers – Draft Environment Plan 2006-2011 – Corporate Customer Council Annual Report – Major recycled water projects – Parramatta relocation – Marketing campaigns – Desalination – Corporate positioning and recycling – Corporate Customer Council Forward Plan The Corporate Customer Council met four times during this period.
5.4.2	A customer council may be utilised by Sydney Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Sydney Water and on the Customer Contract, in accordance with the terms of the relevant customer council charter, and on such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.	Yes	Sydney Water advised in the 1 September 2007 report that the Customer Council covers the representation for areas listed in clause 5.4.4 of the operating Licence; members have been notified about which group they are representing. See comments for Operating Licence clause 5.4.3.

Licence Clause	Requirement	Compliance Certified	Evidence
5.4.3	Sydney Water must appoint the members of a customer council, consistent with this License.	Yes	Sydney Water advised in the 1 September 2007 report that appointment of members complied with the requirements of the Operating Licence.
5.4.4	At all times, the membership of one or more customer councils must between them include a representative from at least each of the following: (a) business and consumer groups; (b) low income households; (c) people living in rural and urban fringe areas; (d) residential consumers; (e) environmental groups; (f) local government; and (g) the Ethnic Communities Council	Yes	Sydney Water advised in the 1 September 2007 report that the Customer Council covers the representation for areas listed in clause 5.4.4 of the operating Licence; members have been notified about which group they are representing. See comments for Operating Licence clause 5.4.3.
5.4.6	The customer council or customer councils under this Licence must comprise: (a) members of any customer council prior to the Commencement Date ("existing members"); and (b) any other person appointed by Sydney Water, consistent with clause 5.4.4.	Yes	Sydney Water advised in the 1 September 2007 report that members of the Council established under the previous Operating Licence have remained.
5.4.7	Subject to clause 5.4.8 the term of a member of a customer council (including the term of an existing member) will expire 2 years after his or her appointment.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
5.4.8	At least half of the persons appointed as members of a customer council must be new members. That is, they must not be persons who were members of a customer council at any time during the period of 2 years before the date of their appointment.	No requirement	Not applicable as Operating Licence clause 5.4.11 applies.
5.4.9	No person may be appointed as a member of a customer council for more than 2 consecutive terms (including, without limitation, any term served as a replacement member under 5.4.10).	No requirement	Not applicable as Operating Licence clause 5.4.11 applies.
5.4.10	If a member's place becomes vacant before the expiration of their term, Sydney Water may appoint a suitable replacement for the remainder of that member's term.	Yes	Sydney Water is waiting for the Property Council to nominate a new representative as previous person has moved to a new position. During the year a number of agencies changed their representative including the Council of Social Service of NSW (NCOSS), the Urban

Licence Clause	Requirement	Compliance Certified	Evidence
			Development Institute of Australia (UDIA) and Blue Scope Steel.
5.4.11	If Sydney Water chooses to establish one or more customer councils the majority of members of which are not individuals, clauses 5.4.8, 5.4.9 and 5.4.12 do not apply to those customer councils.	Yes	Sydney Water had chosen to establish one Customer Council, being the Corporate Customer Council. All members of the Council are not individuals, but representatives of various agencies.
5.4.12	Existing members will be eligible to be appointed for one term and other members for 2 consecutive terms. For the avoidance of doubt: (a) existing members will be regarded as having served their first term at the end of the period, mentioned in clause 5.4.7; and (b) replacement members appointed under clause 5.4.10 will be regarded as having served their first term at the expiration of the term of the member they replaced.	No requirement	Not applicable as Operating Licence clause 5.4.11 applies.
5.4.13	Within 3 months of establishing a customer council, Sydney Water must develop in consultation with members of each customer council, a customer council charter that addresses the following issues: (a) the role of the customer council; (b) selection criteria on how members will be drawn from the community; (c) information on how the customer council will operate; (d) induction processes for new members; (e) a description of the type of matters that will be referred to the customer council; (f) 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; (g) communicating the outcome of the customer council's work to Sydney Water; (h) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and (I) funding and resourcing of the customer council by Sydney Water including sitting fees and expenses for members.	Yes	Sydney Water has a charter that is available on the website. IPART will seek further clarification from Sydney Water in relation to its progress on the 2005/06 operational audit recommendations listed below: – R5.5 Inform all members of the Customer Council, in writing, about those areas of interest that they are expected to represent, at the commencement of each financial year, and inform any new members in this regard at the time of their appointment to the Council. – R5.6 Invite the Chairman of Sydney Metro Catchment Management Authority, or his delegate, to participate in the Customer Council.
5.4.14	There must be a charter for each customer council. However a	Yes	Sydney Water operates one customer council.

Licence Clause	Requirement	Compliance Certified	Evidence
	single charter may be expressed to apply to more than one customer council.		
5.4.15	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 the customer council to discharge the tasks assigned to it.	Yes	Sydney Water advises in the 1 September 2007 report that it has provided a number of papers, reports etc to the Council. Members receive papers approximately 1 week before each meeting. In addition members are provided with papers for noting when required. Sydney Water also responds to requests from members for information.
5.4.16	Sydney Water must report annually on the issues considered by, and the achievements, of each of its customer councils. A copy of the report and each charter for a customer council must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its offices for access or collection by any member of the public, also free of charge.	Yes	Sydney Water advises in the 1 September 2007 report that the Corporate Customer Council Annual Report 2005/06 was endorsed by members and is posted on the Sydney Water website. It is anticipated that the 2006/07 report will be reviewed and endorsed by members at the December 2007 meeting.
5.5	Customer Service Indicators		
5.5.1	Sydney Water must maintain record systems that are sufficient to enable it to measure accurately its performance against the Customer service indicators set out in Schedule 2.	Yes	Sydney Water advises in the 1 September 2007 report that it maintains a quality management system that enables accurate reporting against customer service indicators.
5.5.2	By no later than 1 September 2006 and at the same time in each subsequent year, Sydney Water must report to IPART its performance against the Customer service indicators in Schedule 2 for the immediately preceding financial year.	Yes	The 2006/07 report for the Customer Service Indicators is included at section 1.2 of the 1 September 2007 report.
5.5.3	The report must include an analysis of any problems of a systemic nature.	Yes	The report on systemic problems is included in section 1.2 of the 1 September 2007 report.

6	Complaint and dispute handling		
6.1	Internal Dispute Resolution Process		
6.1.1	Sydney Water must establish and maintain internal complaint handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Sydney Water.	Yes	Sydney Water reported that it maintains an internal complaint handling procedure for receiving, responding to and resolving complaints.
6.1.2	The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS4269-1995 Complaint Handling.	Yes	Sydney Water reported that its internal complaints handling procedure is based on the new standard AS ISO 1002-2006, which replaces AS4269-1995 (Australian Standard for complaint handling).
6.1.3	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 procedure works.	Yes	Sydney Water advised that the brochures 'Our Customer Contract in Brief' and 'Sharing Your Views with Sydney Water' are mailed out to customers annually with consumption bill and are available to consumers upon request. Sydney Water advised that the Customer Contract in Brief satisfies OL clause 5.1.8, and OL clause 5.1.9, where the clause refers to "Customers and any other person on request". Sydney Water has established web link from the brochure to EWON's website and complaints handling site.
6.1.4	Sydney Water must provide information of the nature described in clause 6.1.3 to Customers through their quarterly, or other, bills at least once annually.	Yes	Sydney Water reported that the brochures 'Our Customer Contract in Brief' and 'Sharing Your Views with Sydney Water' are provided to customers annually with their quarterly accounts.
6.2	External Dispute Resolution Scheme		
6.2.1	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.	Yes	Sydney Water is a member of the Energy and Water Industry Ombudsman of NSW (EWON)
6.2.3	Sydney Water must prepare a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed.	Yes	Sydney Water reported that the brochure 'Sharing Your Views with Sydney Water' outlines both the internal and external complaint handling process.
6.2.4	Sydney Water must provide the pamphlet to Customers through their quarterly or other bills, at least once annually.	Yes	Sydney Water reported that the brochure 'Sharing Your Views with Sydney Water' is provided to customers annually with their quarterly accounts.
6.2.5	Sydney Water must provide IPART with written reports of the determinations made by the dispute resolution body based on information available to Sydney Water and information reasonably	Yes	The report on complaints to the Energy and Water Ombudsman (EWON) 2006/07 was provided to IPART with the suite of 1 September reports required by the Operating Licence.

	obtained from the dispute resolution body. Where considered appropriate by Sydney Water and the dispute resolution body, confidentiality arrangements are to be made so as not to disclose the Customer or Consumer's identity in such reports.		There was no determination made by EWON during 2006/07.
6.2.6	Sydney Water must report each year to IPART based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. The report must take into account any issues raised by the dispute resolution body and must contain the following information: (a) the number and types of complaints received by the dispute resolution body, classified in accordance with the dispute resolution body's reporting arrangements; and (b) any other relevant information required by IPART to be included in the report.	Yes	The number and type of complaints were contained in the annual report 'Customer Complaints received by EWON' for 2006/07.
6.2.7	The report in clause 6.2.6 must be made available to the public free of charge.	Yes	The 2005/06 EWON report is on the Sydney Water website and is available to the public free of charge. The 2006/07 EWON Report has yet to be posted on the Sydney Water website at the time of IPART's desktop review.
6.3	**Complaints to other bodies**		
6.3.1	Sydney Water must report to the IPART by no later than 1 September each year on all complaints made to Sydney Water in the preceding financial year that relate to its performance under this Licence or the Customer Contract that were referred for resolution by an external dispute resolution body (other than a court), for example the Consumer Trader and Tenancy Tribunal.	Yes	Sydney Water reported in the 1 September 2007 report that there was one application lodged with the Consumer, Trader & Tenancy Tribunal (CTTT) against Sydney Water in 2006/07. However, the claim was dismissed on 3 May 2007.
6.3.2	Sydney Water must report to the IPART by no later than 1 September each year all civil actions in the preceding financial year that were brought against Sydney Water in all courts where the person bringing the action sought damages or other relief against Sydney Water for Sydney Water's failure to comply with a provision of its Customer Contract.	Yes	Sydney Water reported to IPART in section 1.3 of the 1 September 2007 report that there were three such actions (with details); there was no problem identified of a systemic nature.
6.3.3	The reports required under clauses 6.3.1 and 6.3.2 must contain the following information: (a) the number and types of matters; (b) the outcome of the matters; (c) if the matters were subject to a negotiated settlement, how	Yes	See comments under Operating Licence clause 6.3.2.

	they were settled; (d) any problem of a systemic nature arising from the matters or which the matters uncovered; and (e) any other information that IPART may reasonably request.		
7	Environment – indicators and management		
7.1	Environment Indicators		
7.1.1	Each year Sydney Water must monitor, record, compile data and report on the environmental performance indicators in Schedule 3 for the immediately preceding financial year.	Yes	Sydney Water reported in the 1 September report that monitoring of the environmental performance indicators commenced in July 2005. Sydney Water has developed Performance Indicator (PI) Sheets for each of the Schedule 3 indicators. The collection of data for the environmental performance indicators is managed through the Folios of Progress system, which is a component of Sydney Water's Online Corporate Compliance Program. Sydney Water's Asset Management Division manages the majority of the Environmental Indicators under its control via the BMIS document management system, which has traceability of information, reported and signed off by the General Manager Asset Management.
7.1.2	By no later than 1 September 2006 and at the same time each subsequent year, (or an alternative date specified by IPART), Sydney Water must report on its performance against the environmental performance indicators, in Schedule 3 in a manner to be approved by IPART.	Yes	The final report on the Environmental Performance Indicators for 2005/06 was included in Sydney Water's Annual report 2005/06 in November 2006. IPART had agreed to the revised timing of 30 September for the delivery of the 2006/07 environmental performance indicators report and subsequent reports.
7.1.3	The report must provide information which enables a year to year comparison in relation to Sydney Water's performance against the environmental performance indicators in Schedule 3. In particular, Sydney Water is to compare the performance indicators in Schedule 3 with historical annual values over at least the previous 10 years where comparable data is available.	Yes	See comments for Operating Licence clause 7.1.2.
7.2	Environmental Management		
7.2.1	By no later than 1 month from the Commencement Date, Sydney Water must have in place an environmental management system certified to AS/NZS ISO 14001 to manage environmental risk.	Yes	Sydney Water gained certification of its Environmental Management System (EMS) to AS/NZS ISO 14001:2004 on 3 May 2005. The certification expires on 3 May 2008. The EMS was audited

			last year and Sydney Water had achieved full compliance on this requirement.
7.2.2	Sydney Water must produce a five-year Environment Plan by 30 September 2005. Sydney Water must annually review and update the Environment Plan in accordance with its environmental management system referred to in clause 7.2.1.	Yes	Sydney Water reported that the Environment Plan will be reviewed annually as part of the Sydney Water Environmental Management System. The 2006-2011 Environment Plan was published on the Sydney Water website on 1 August 2006 following its approval on 21 June 2006 at the meeting of the Sydney Water Board.
7.2.4	The Environment Plan must: (a) contain details of Sydney Water's program for environmental improvement for its water, waste water and stormwater strategies, as well as the environmental aspects of its other activities such as energy management, waste minimisation, heritage and Botany Wetlands; (b) endorse Ecologically Sustainable Development principles; (c) be integrated into Sydney Water's business plans; (d) incorporate the objectives of the energy management plan of Sydney Water to: (e) improve energy efficiency and generate renewable energy; and (f) minimise the environmental impact of its energy consumption; and (g) comply with all relevant energy related regulation; and (h) incorporate environmental improvement targets and time tables for Sydney Water to achieve over the term of the Environment Plan.	Yes	Sydney Water reported in the 1 September 2007 report the following: (a) The published Plan contains details of each of the areas of environmental management (refer 2006-2011 Environment Plan). (b) The 2006-2011 Environment Plan interprets the four ESD Principles. These principles are aligned with each objective within the Plan. (c) The 2006-2011 Environment Plan is linked to internal quarterly reporting processes to the SW Board, and is externally published within the Annual Report. (d) The objectives of the SW Energy Management Plan have been incorporated into the Environment Plan. (e) The 2006-2011 Environment Plan includes timetables for achieving environmental actions against each of the objectives for the term of the Plan. Sydney Water 2007-2012 Environmental Plan has been published on its website.
7.2.5	The Environment Plan must be posted each year on Sydney Water's website on the internet for downloading free of charge and made available at its premises for access or collection by any member of the public.	Yes	The 2007-2012 Environmental Plan is available on Sydney Water website. Sydney Water reported that the Environment Plan was also made available at the Customer Service Centres for the public to download and receive a printout.
7.2.6	By no later than 1 September each year, or an alternative later date specified by IPART, Sydney Water must report to IPART on its progress for the previous financial year in meeting the Environment Plan. The report is to include Sydney Water's compliance with the targets and timetables in clause 7.2.4, and in managing the Botany Wetlands. The information in the report	Yes	Sydney Water advised (in the 1 September 2007 report) that the Environmental Plan 2005-2010 Progress Report (2006) was posted on its website in December 2006. IPART has agreed to the revised timing of 30 September for delivery of the 2006/07 Environmental Plan progress report and subsequent reports.

	must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its premises for access or collection by any member of the public.		
7.2.7	Each year Sydney Water must review the Environment Plan by consulting with DEC, DIPNR, IPART, and peak environmental non-governmental organisations for the purpose of considering the views of those consulted organisations and whether they seek amendments to the Environmental Plan in the subsequent year.	Yes	Sydney Water advised (in the 1 September report) that feedback was sought from DEC, Department of Planning, IPART and peak environmental non-governmental organisations.
7.3	Potable Water Use		
7.3.1	Sydney Water must ensure that potable water use for treatment processes at each of the following sewage treatment plants has been reduced by 80% in volumetric terms from its 2003/04 usage rates by 30 June 2009 – Malabar, North Head and Bondi.	No requirement	The 1 September 2007 report stipulates progress reduction in the use of potable water compared to the June 09 target, and explains actions taken to achieve the current reductions. Sydney Water had met the requirement at North Head in 2006/07. Progress towards meeting the requirement by 30 June 2009 is high for the other two sewage treatment plants.
7.3.2	By 30 June 2009 Sydney Water must ensure that all sewage treatment plants (other than Malabar, North Head and Bondi, and storm flow sewage treatment plants at Fairfield, Bellambi and Port Kembla) use at least 85% recycled water for treatment processes.	No requirement	The 1 September 2007 report stipulates 23 out of the 24 STPs has achieved (and surpassed) the 30 June 2009 target; the remaining STP (Blackheath) is due to be decommissioned in 2008.
7.3.3	Sydney Water must undertake potable water efficiency audits at all sewage treatment plants (other than Malabar, North Head and Bondi) and implement appropriate findings under a water conservation plan by 30 June 2009.	No requirement	The 1 September 2007 report stipulates that potable water efficiency audits have been completed at 27 sewage treatment plants. Water Conservation Plan version 1 has been prepared incorporating findings from the audits at 12 STPs. Audits of the storm water flow sewage treatment plants will be undertaken in 2007/08.
7.3.4	By no later than 1 September each year, Sydney Water must report to IPART on its progress in relation to clause 7.3.1, 7.3.2 and 7.3.3 for the previous 12 months, to enable the IPART to consider and report on the matter as part of the Annual audit.	No requirement	See comments above.
8	Pricing		
	Sydney Water must set the level of fees, charges, and other amounts payable for its Services subject to the terms of this Licence, the Act and the maximum prices and methodologies for Sydney Water's Services determined from time to time by IPART under the IPART Act.	Yes	Sydney Water noted the 1 July 2006 to 30 June 2007 prices based IPART's Determination no. 5 of 2005.

9	Water conservation and demand management		
9.1	Water Conservation Target		
9.1.1	Sydney Water must take action to reduce the quantity of water (other than Re-use water) it draws from all sources to meet the water conservation target of 329 litres per capita per day by 2010/2011 (being a reduction of 177 litres per capita per day or 35% from the 1990/1991 baseline).	No requirement	The Water Conservation and Recycling Implementation Report 2006/2007 (included in the suite of 1 September 2007 reports) shows achievement, progress (and investment) against the June 2011 target of 329 litres per capita per day, as well as a list of programs currently in force and the planned strategy to 2010-2011 for meeting the Operating Licence target and Metropolitan Water Plan requirements.
9.1.3	By no later than 1 September each year, Sydney Water must report to IPART on its progress in complying with the water conservation target in clause 9.1.1 (which may include any target for Water leakage), to enable IPART to consider and report on the matter as part of the Annual audit.	Yes	See comments for clause 9.1.1 Sydney Water had not addressed some of the recommendations arising from the 2005/06 audit in either the 1 September suite of reports or the Folios of Progress Reports submitted in 2007. These comprise: – R9.2 Consider adopting a consistent set of end-use and other demand side planning assumptions in its reporting, including use of utility levelised cost ($/kL or $/ML saved) to further aid comparison between water demand management and/or alternative supply options. – R9.3 Consider development of a Register of Models that describes the name/version, areas of application, level of calibration and expected accuracy/limitations for all of its relevant modelling tools. – R9.5 Consider recording an estimate of the roof area for rainwater tank installations to improve its planning assumptions. IPART will seek clarifications from Sydney Water regarding its progress against these recommendations.
9.3	Reducing Discharges		
9.3.1	Sydney Water must meet the Re-use water targets set by the Minister or Sydney Water from time to time.	No requirement	Sydney Water advises (in the 1 September 2007 report) that no target has been set.
9.3.2	Sydney Water must take action to generate Re-use water from the sewage or effluent of Customers and Consumers by intercepting or otherwise preventing the discharge of that sewage or effluent into the ocean, waterways and other waters.		
9.3.3	By no later than 1 September each year, Sydney Water must report	No requirement	No target has been set.

	to IPART on its progress in meeting the Re-use water target required under clause 9.3.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.		
9.4	**Water Conservation Rating and Labelling**		
9.4.1	Sydney Water, through continuing support for any national scheme (whether legislated or not), is to encourage manufacturers of water appliances to improve the water use efficiency of these appliances where consistent with Sydney Water's objectives.	Yes	Washing Machine Rebate as stipulated in the Water Conservation and Recycling Implementation Report 2006/2007provided with the suite of reports due by 1 September 2007.
9.4.2	By no later than 1 September each year, Sydney Water must report to IPART on its performance under clause 9.4.1 for the previous financial year, to enable IPART to consider and report on the matter as part of the Annual audit.	Yes	See comments for clause 9.4.1.
10	Licence authorisation and Area of Operations		
10.1	**What the Licence Authorises and Regulates**		
10.1.1	This Licence is granted to enable and require Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems for providing the Services throughout the Area of Operations.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
10.1.2	Sydney Water must ensure that its systems and Services comply with the quality and performance standards required in this Licence or required to be developed under this Licence.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
10.2	**Powers Not Limited**		
	The Licence does not restrict or affect Sydney Water's power to carry out any functions imposed under any applicable law.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
10.3	**Area of Operations**		
	The Area if Operations may be varied only as permitted under the Act.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
10.4	**Connection of Services**		
10.4.1	Subject to Sydney Water continuing to be in compliance with any applicable law, Sydney Water must ensure that its Services are	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.

	available for connection on request to any Property situated in the Area of Operations.		
10.4.2	Connection to the Services is subject to any conditions Sydney Water may lawfully determine to ensure the safe, reliable and financially viable supply of Services to Properties in the Area of Operations in accordance with this Licence. Satisfactory compliance with the conditions of connection is an essential requirement for gaining Sydney Water's approval for connection of the land to a water main or sewer main under section 56(2) of the Act.	No requirement	
10.5	**Non-exclusive Licence**		
	This Licence does not prohibit another person from providing services in the Area of Operations that are the same as or similar to the Services, if the person is lawfully entitled to do so.	No requirement	
11	Liability issues		
11.1	**Contracting Out**		
11.1.1	Subjecting to the Act, the SOC Act and any other applicable law, Sydney Water may contract out the provision, construction, operation, management or maintenance of any of the systems and Services the subject of this Licence.	No requirement	Sydney Water currently has the following arrangements in regards to contracting out: – Build Own Operate (BOO) agreements cover the water filtration plants at Prospect, Macarthur, Woronora and Illawarra – Build Own Operate and Transfer (BOOT) agreement covers the Blue Mountain Sewerage Transfer Scheme – Design Build Operate (DBO) agreement covers the Gerringong-Gerroa Sewerage Scheme. All contracts are monitored, managed and appraised through the appropriate frameworks and management systems to ensure performance standards are maintained and/or quality/quantity compliance is met.
11.1.2	Contracting out under clause 11.1.1 does not relieve Sydney Water of its responsibility to comply with its obligations under this Licence.	Yes	Sydney Water monitors contractor performance for infrastructure works as specified in its Capital Project Delivery Management System (ISO 9001- certified) as well as in general contract provisions. Contractor Performance Appraisals are conducted for all contracts.

11.2	**Damage and Compensation to Persons**		
	Sydney Water is required by the Act to do as little damage as practicable in exercising its functions under Division 4 of Part 6 of the Act, and to compensate persons who suffer damage by the exercise of those functions.	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007.
11.3	**Competitive Neutrality**		
11.3.1	Subject to the Act, the SOC Act and any applicable law, Sydney Water must comply, and must ensure that its Subsidiaries comply, with the competitive neutrality policies and guidelines adopted by New South Wales under clause 3 of the Competition Principles Agreement.	Yes	Sydney Water advises (in the 1 September 2007 report) that no complain about competitive neutrality were made to Sydney Water or IPART during 2006/07. Sydney Water is providing input on the regulations under the Water Industry Competition Act 2006.
11.3.2	This Part is in addition to any obligations of Sydney Water under the Trade Practices Act 1974 and the Competition Code of NSW and other States and Territories as applicable.	No requirement	See comments for clause 11.3.1
12	Operational audits of this Licence		
12.2	**What the audit is to report on**		
12.2.1 (b)	IPART or the person undertaking the Annual audit must investigate and prepare a report on any of, or any part of any of, or all of, the following: (b) Sydney Water's implementation of any Memorandum of Understanding	Yes	Sydney Water 2006/07 Annual Compliance Report to IPART, 25 September 2007. IPART noted the following from the Folios of Progress Report. In case of MoU with DEC (now DECC): – There was no record showing the Chief Executive Officers had met under the MoU (MoU requires "not less than once per financial year"). – Strategic Liaison Group (SLG) meetings were held on 3 August 2006, 30 November 2006 and 24 May 2007 respectively – Operational Policy Committee (OPG) meetings were held on 5 October 2006, 21 December 2006 and 27 February 2007 respectively (MoU requires "at least 4 times"). In case of MoU with WAMC (now part of the DWE): – There was no record showing the Chief Executive Officers had met under the MoU (MoU requires "not less than once per financial year") – Sydney Water reported that it had worked together with WAMC both in inter-agency for and through bilateral

			discussions. For example, i) Clarify the impact of the Replacement Flows Project of the Western Sydney Recycled Water Initiative on water users that extract water from South Creek ii) Develop, as part of an inter-agency group, a water sharing plan for Sydney's surface water sources (and will bilaterally negotiate some aspects of the plan, such as water access arrangements for the North Richmond water filtration plant) iii) Delegation of some of WAMC's powers to Sydney Water. – Sydney Water and DWE also maintain a cooperative relationship, through both informal and formal liaisons, on matters relating to the water management licence. Sydney Water achieved Moderate compliance in the 2005/06 operational audit for the implementation of its MoUs. The auditor recommended Sydney Water "Actively pursue the participation of DEC (EPA) and DNR (WAMC) to achieve the cooperative relationships, and benefits, as evidenced through the NSW Health MoU". IPART will discuss this matter with Sydney Water with a view to obtain further evidence from Sydney Water to demonstrate its compliance with the Licence requirement.

D Sydney Water 2006/07 Annual Compliance Report

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Statement of Compliance

To: Independent Pricing and Regulatory Tribunal of NSW (the **Tribunal**)
Level 2, 44 Market Street
Sydney NSW 2000

Attention: The Chief Executive Officer

Sydney Water Corporation reports as follows:

The Annual Compliance Report documents compliance during 2006/07 with those obligations in Sydney Water Corporation's 2005-2010 operating licence that are not subject to an operational audit. These obligations are listed by clause in Schedule A.

The Annual Compliance Report has been prepared by Sydney Water Corporation with all due care and skill in full knowledge of the obligations to which it is subject and in compliance with the Tribunal's Monitoring and Reporting Protocol, if applicable.

Schedule B provides information on those licence obligations that were not audited with which Sydney Water Corporation did not fully comply during 2006/07.

Other than the information provided in Schedule B, Sydney Water Corporation has complied with all obligations to which it is subject that have not been audited.

Schedule C outlines any factors and emerging issues that may affect compliance with a licence clause in future years.

The Annual Compliance Report has been approved by the Board of Directors of Sydney Water Corporation at its meeting on 19 September 2007.

Signed:

Name: Dr Tom Parry

Title: Chairman, Sydney Water

25/09/07

Date:

Signed:

Name: Dr Kerry Schott

Title: Managing Director, Sydney Water

25. 9. 07

Date:

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Schedule A: Licence obligations for Sydney Water Corporation not audited in 2006/07

[Instruction: For each licence clause Sydney Water Corporation must specify whether or not there was full compliance with the obligation. There must be a "yes" or "no" response in the compliance column corresponding to each clause.

Where a "no" response is given, please provide further detail in Schedule B. Where a "yes" response is given and there are factors or emerging issues which may affect compliance in future audits, please outline these factors or issues in Schedule C.]

Operating Licence Obligation	Clause	Compliance Yes/No
Water Quality		
Drinking Water Quality – Monitoring	3.2.1	Yes
	3.2.2	Yes
Drinking Water - Incident Management	3.5.1	Yes
	3.5.2	Yes
	3.5.3	Yes
	3.5.4	Yes
Infrastructure performance		
Reporting on system performance standards	4.5.1	Yes
	4.5.2	Yes
	4.5.3	Yes
	4.5.4	Yes
Review of system performance standards	4.6.4	Yes
Service quality and system performance indicators	4.7.1	Yes
	4.7.3	Yes
	4.7.4	Yes
Water leakage	4.11.1	Yes
	4.11.3	Yes
Reports Related to Water Leakage	4.12.2	Yes
	4.12.3	Yes
	4.12.4	Yes
Priority Sewerage	4.14.1	Yes
	4.14.2	Yes
	4.14.3	Yes
Customer and Consumer rights		

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Operating Licence Obligation	Clause	Compliance Yes/No
Customer contract	5.1.4	Yes
	5.1.7	Yes
	5.1.9	Yes
	5.1.10	Yes
Consumers	5.2	Yes
Code of Practice and Procedure on Debt and Disconnection	5.3.1	Yes
	5.3.2	Yes
	5.3.3	Yes
	5.3.4	Yes
Customer Councils	5.4.1	Yes
	5.4.2	Yes
	5.4.3	Yes
	5.4.4	Yes
	5.4.6	Yes
	5.4.7	Yes
	5.4.8	Yes
	5.4.9	Yes
	5.4.10	Yes
	5.4.11	Yes
	5.4.12	Yes
	5.4.13	Yes
	5.4.14	Yes
	5.4.15	Yes
	5.4.16	Yes
Customer Service Indicators	5.5.1	Yes
	5.5.2	Yes
	5.5.3	Yes
Complaints and dispute handling		
Internal Dispute Resolution Process	6.1.1	Yes
	6.1.2	Yes
	6.1.3	Yes
	6.1.4	Yes
External Dispute Resolution Scheme	6.2.1	Yes
	6.2.3	Yes

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Operating Licence Obligation	Clause	Compliance Yes/No
	6.2.4	Yes
	6.2.5	Yes
	6.2.6	Yes
	6.2.7	Yes
Complaints to other bodies	6.3.1	Yes
	6.3.2	Yes
	6.3.3	Yes
Environment – Indicators and Management		
Environmental Indicators	7.1.1	Yes
	7.1.2	Yes
	7.1.3	Yes
	7.1.4	Yes
Environmental Management	7.2.1	Yes
	7.2.2	Yes
	7.2.4	Yes
	7.2.5	Yes
	7.2.6	Yes
	7.2.7	Yes
Potable Water Use	7.3.1	Yes
	7.3.2	Yes
	7.3.3	Yes
	7.3.4	Yes
Pricing		
Pricing	8	Yes
Water conservation and demand management		
Water Conservation Target	9.1.1	Yes
	9.1.3	Yes
Reducing Discharges	9.3.1	Yes
	9.3.2	Yes
	9.3.3	Yes
Water Conservation Rating and Labelling	9.4.1	Yes
	9.4.2	Yes
Licence authorisation and area of operations		
What the licence authorises and regulates	10.1.1	Yes

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Operating Licence Obligation	Clause	Compliance Yes/No
	10.1.2	Yes
Powers not limited	10.2	Yes
Area of operations	10.3	Yes
Connection of Services	10.4.1	Yes
	10.4.2	Yes
Non-exclusive Licence	10.5	Yes
Liability issues		
Contracting out	11.1.1	Yes
	11.1.2	Yes
Damage and compensation to persons	11.2	Yes
Competitive neutrality	11.3.1	Yes
	11.3.2	Yes
What the audit is to report on		
Sydney Water's implementation of any Memorandum of Understanding	12.2.1 (b)	Yes

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Schedule B: Non-Compliances for Sydney Water Corporation's licence obligations not audited in 2006/07

[Instruction: If a "no" response was provided in the compliance column for a licence clause in Schedule A, then a description of the non-compliance must be provided for that clause in Schedule B.]

Licence clause	Obligation	Description of non-compliance
List licence clauses	*List obligations breached, including a brief description of each obligation*	➢ *Nature and extent of non-compliance* ➢ *Reasons for non-compliance* ➢ *Remedial action taken* ➢ *Actual/ anticipated date of full compliance*
Nil		

2006/07 Annual Compliance Report

Submitted by Sydney Water Corporation

Schedule C: Issues that may affect compliance in future audits

[Instruction: If a "yes" response was provided in the compliance column for a licence clause in Schedule A and there are factors or emerging issues that may affect compliance in future audits, please describe these factors or issues in Schedule C.]

Licence clause	Obligation	Description of emerging issue
List licence clauses	*List obligations including a brief description of each obligation*	➢ *Describe the issue* ➢ *Explain how the issue could affect compliance in the future with licence clause* ➢ *Outline how the issue is being managed* ➢ *Explain any impedances to management.*
Nil		