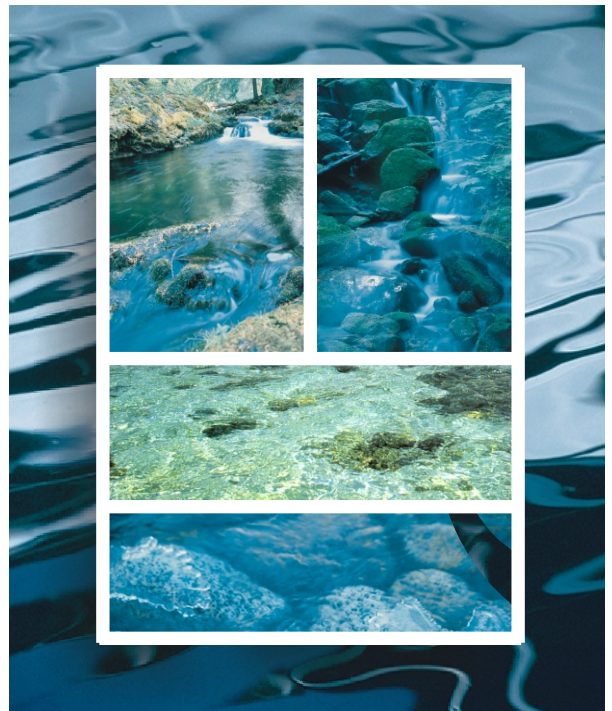




INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

SYDNEY WATER CORPORATION OPERATIONAL AUDIT 2005/2006



March 2007

in association with



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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	<i>Sydney Water Act, 1994</i>
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
<i>E.Coli</i>	<i>Escherichia coli</i>
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
HVRF	Hunter Valley Research Foundation
IICATS	Integrated Instrumentation, Control, Automation and Telemetry System
IPART	Independent Pricing and Regulatory Tribunal (NSW)



Acronym	Description
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
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



Acronym	Description
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	<i>Sydney Water Act, 1994.</i>
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 2005 to 30 June 2006.
Auditor	GHD Pty Ltd in association with Hunter Valley Research Foundation.
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 2005
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 <i>Sydney Water Act, 1994</i> .
Operating Licence	The Licence between 1 July 2005 and 30 June 2010.
Water Management Licence	A Water Management Licence granted under the <i>Water Act, 1912</i> 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 or there is no requirement for Sydney Water to meet, such as a definition, or a requirement placed upon another agency.

Preface

GHD Pty Ltd, in association with the Hunter Valley Research Foundation (HVRF), was commissioned by the Independent Pricing and Regulatory Tribunal (IPART) to undertake the 2005/06 Operational Audit of the Sydney Water Corporation (Sydney Water). The 2005/06 Operational Audit (and the extent of this report) covers the period 1 July 2005 to 30 June 2006.

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 2004/05 Operational Audit.

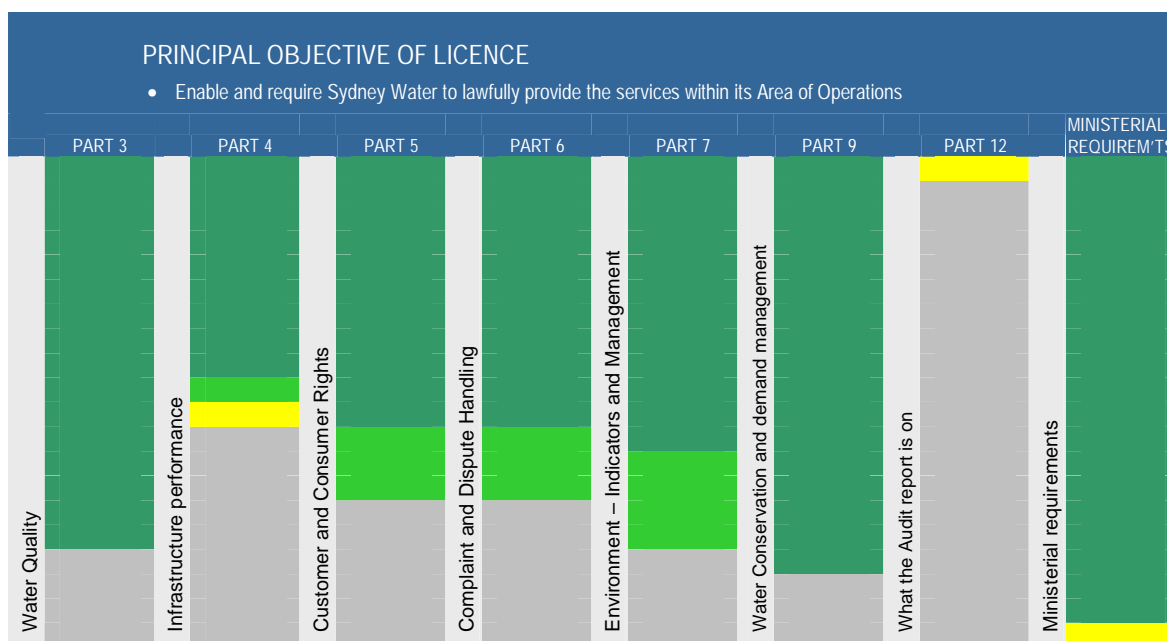
The findings of the report are presented in a format consistent with the Operating Licence structure and not in a 'prioritised order' or 'order of significance'. The report also identifies factors that have affected compliance and presents recommendations to improve compliance in subsequent years.

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.

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** and three **Moderate compliance** ratings were awarded. Figure 0-1 provides an indicative overview of Sydney Water's level of compliance.

Figure 0-1 Overview of Compliance for 2005/06 Audit Period



	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.

NOTE: Figure is indicative only.

Compliance with the auditable Parts of the 2005-2010 Operating Licence (shown in brackets below) for the 2005/06 Audit period is summarised below.

Memoranda of Understanding (Part 2.3)

Sydney Water is required to maintain Memoranda of Understanding (MOU) with the Water Administration Ministerial Corporation (WAMC), NSW Department of Health (NSW Health) and the Environment Protection Authority (EPA) for the term of the Licence. The audit is to assess the level of *implementation* of the MOUs, which, in turn, are to form the basis of a “*cooperative relationship*” between the parties.

Overall, Sydney Water’s *implementation* across its MOUs has been assessed as **Moderate**. It exhibited **Full implementation** for the MOU with NSW Health, which continued to provide a sound model.

Moderate implementation was assigned for the EPA MOU and **Low implementation** for the MOU with WAMC.

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 in its management of water supplies;
- » The preparation of reports on water quality monitoring and water quality improvement (annual *Drinking Water Quality Report*, endorsed by NSW Health, and an *Annual Water Quality Improvement 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 scheme and other schemes.

Infrastructure Performance (Part 4)

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

Moderate compliance was assigned in achieving specified Response Times for Water Main Breaks though Sydney Water applied substantial resources towards meeting these requirements. Higher achievement in response times may impact other requirements, such as Water Continuity.

For the *Ministerial Requirement* directing Sydney Water to install 18 flow meters in 2005/06 and creating 21 pressure zones by 2007, Sydney Water achieved **Moderate** and **High compliance**, respectively.

Customer and Consumer Rights (Part 5)

Many of the Customer Contract clauses in 2005/06 concerned procedural or informational requirements for which Sydney Water was rated as '**High**' to '**Full compliance**'.

Similarly, the pre-existing Customer Contract was annexed, unaltered, to the new Licence and thus many of the procedural clauses had **No requirement**, though Sydney Water achieved **Full compliance** with most of the operating clauses relating to the Contract.

Likewise, Sydney Water obtained **Full compliance** with most aspects of the Customer Councils and overall **Full compliance** with the Code of Practice and procedure on Debt and Disconnection.

Complaints and Dispute Handling (Part 6)

Sydney Water has established and maintained an internal complaint handling procedures, which is required to adherence to the Australian Standard, and obtained **Full to High compliance** with these requirements. The majority of the issue, raised in the 2004/05 audit, had also been addressed including a further qualitative customer satisfaction survey and more comprehensive skills assessment and staff training in complaint handling and dispute resolution.

The Energy and Water Ombudsman NSW (EWON) continued to be the mechanism adopted by Sydney Water for external dispute resolution, through the independent review of customer complaints. Sydney Water achieved **Full compliance** with respect to all aspects of the scheme.

Two complaints were referred to "other bodies", being the Consumer, Trader and Tenancy Tribunal (CTTT) and a Civil Court and Sydney Water's performance in these matters was assessed as **Full compliance** and **High compliance**, respectively.

Environment – Indicators and Management (Part 7)

Sydney Water received **Full to High compliance** for the monitoring, recording, compiling of data and reporting on its performance against its Environmental Performance Indicators (EPIs), though some comparable long-term (previous 10 years) values were not, understandably, available for all newly prescribed or amended indicators.

Full compliance was also awarded to Sydney Water for having in place a certified Environmental Management System (EMS) to AS/NZS ISO 14001 as of 3 May 2005.

Sydney Water received a **Full to High compliance** for the requirements to consult, prepare and make freely available an *Environment Plan 2005-2010*, by 30 September 2005, and to include specific strategies, objectives, targets and timetables in the Plan. **Full compliance** was also awarded for the Environment Plan to endorse ESD Principles and to be integrated into its Business Plans, although there was scope to improve the transparency of the latter requirement.

Sydney Water is required to report on its progress in meeting the Environment Plan 2005-2010 over the year and was assigned **High compliance** for this task. Further, it received **Full compliance** for the requirement to review the Environment Plan, annually, having met its requirements to consult and, subsequently, produced an amended draft Plan by the end of the audit period.

Full compliance was also assigned for reporting progress in replacing the use of potable water at its Sewerage Treatment Plants, with recycled water, and for conducting a trial to determine the benefit and cost, and impediments to providing individual units, in new multi-unit buildings, with individual water meters.

Water Conservation and Demand Management (Part 9)

Full compliance has been achieved by Sydney Water in taking 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 2011. Climate corrected demand is reported to be 335 litres per capita per day (LCD) for 2005-06.

(Note: Unlike previous years, the current Operating Licence does not contain a requirement to exclude the effect of drought related water restrictions).

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

There was no reuse target set by the Minister for Sydney Water over 2005/06, therefore **No requirement** was assigned. However, Sydney Water has undertaken actions to reuse 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, achieving **Full compliance** for this requirement.

Sydney Water has encouraged manufacturers of water appliances to improve the water use efficiency of these appliances through continuing support for the Water Efficiency Labelling and Standards (WELS) scheme achieving **Full compliance** for this condition.

For the *Ministerial Requirement* requiring Sydney Water to investigate and implement all feasible options for industrial and domestic reuse, Sydney Water achieved **Full compliance**.

A tabular comparison of the compliance levels attained by Sydney Water in the 2005/06 Audit period and over the four previous audit periods is presented in Appendix A.

‘The Big Picture’

The 2005/06 Operational Audit of the Sydney Water Corporation has identified performance against the following key issues as ‘the big picture’ items for noting or action.

In brief:

- » Sydney Water continued to supply excellent quality, treated drinking water through comprehensive water quality management, planning and monitoring systems, which comply 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 and subject to a continuous improvement program. Such performance is essential for Sydney Water in fulfilling its role to supply safe drinking and “other grades” of water.
- » Sydney Water demonstrated a high level of commitment to implementing the requirements placed on it to achieve water conservation. This commitment is evident through its strategic planning and implementation programs (like new recycling water opportunities, sewer mining and water conservation rating and labeling schemes).

Although early in the program cycle, Sydney Water’s performance over 2005/06 (of 335 litres per capita per day) in achieving the (climate corrected) water conservation target (of 329 litres per capita per day) by 2011 is on track. The duration of these water savings is however, significantly dependant upon the community’s continuing response to water conservation education programs and longer-term regulatory measures.

A key to the 2005/06 water conservation performance, compared to Sydney Water’s under performance in previous years, relates the inclusion of regulatory controls on water use. In previous years, the water saving impact of regulation was excluded from Sydney Water’s water conservation performance. It is now permitted under the new Operating Licence.

Further contingency measures are planned over the intervening period, as per requirements. The costs of implementing further water conservation measures will however, increasingly rely on ‘policy’ decisions within Government as, Sydney Water advises, the economic benefit to cost ratio of further measures is approaching, or falling below, unity.

- » The new Operating Licence has required Sydney Water to focus more clearly on water demand and supply management. In response, Sydney Water has demonstrated organisational reforms to drive improvements such as the re-organisation of its own field resources and more effective use of contractors.
- » System Performance Standards (SPS) for water pressure, water continuity, sewerage overflows and reporting requirements were met by Sydney Water. The need to meet response times for water main breaks only achieved moderate compliance however, in achieving compliance with this standard, there is an increasing need for a balance against other, potentially conflicting standards, such as water continuity.
- » More performance-based, and less prescriptive, (Ministerial) requirements are recommended in the implementation of new system improvement programs (such as flow meters and water pressure control zones). This will enable the benefits of system and design experience to be applied to

achieve the required outcomes, albeit through differing (numeric) deliverables.

- » The adoption and implementation of the Monitoring and Reporting Protocols for System Performance is continuing to prove beneficial, so too have been the Ministerial requirements to drive improvement in sewerage overflowing management.
- » Sydney Water has established and maintained an Environmental Management System, certified as meeting the requirements of AS/NZ ISO 14001, which should improve the management of its environmental risk.

Sydney Water has also embraced the challenges of its Environmental Performance Indicators (EPI) and has set in place a comprehensive EPI monitoring and reporting system.

In the same vein, Sydney Water is actively implementing its Environmental Management Plan, as exemplified by the use of recycled, as opposed to potable, water for treatment process at its Sewerage Treatment Plants.

- » Sydney Water's has been successful in improving its customer and consumer management and has increased the use, and effectiveness of the revitalised 'Customer Council'. Opportunity for further improvement is available in monitoring the effectiveness of its staff training in customer service, particularly of repair and service personnel.
- » Sydney Water demonstrated improved complaint management and a more positive performance was evident over 2005/06.
- » Sydney Water has implemented its Memorandums of Understanding to achieve '*cooperative relationships*' with NSW Health. A fillip is needed to improve the implementation of the EPA (DEC) and WAMC MOUs and this may come with replacement MOUs in 2006/07.

Summary of Key Recommendations

The *key recommendations* of the 2005/06 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 2 – Sydney Water's Responsibilities

It is recommended that Sydney Water:

- R2.1 Actively pursue the participation of DEC (EPA) and DNR (WAMC) to achieve the *cooperative relationships*, and benefits, as evidenced through the Health MOU.

Licence Part 3 - Water Quality

No significant recommendations directly affecting compliance have been identified in this section of the audit.

Licence Part 4 - Infrastructure Performance

It is recommended that Sydney Water:

- R4.1 Implement the revised flowmeter installation program, as advised to the Minister in Sydney Water's letter of 8 August 2006.
- R4.2 Implement a reporting process/protocol for delays from consent authorities.

Licence Part 5 - Customer and Consumer Rights

It is recommended that Sydney Water:

- R5.1 Conduct an annual customer survey with industrial and commercial customers to provide feedback on the performance of Sydney Water.
- R5.2 Continue to implement programs for the improvement of the skills assessment and training of relevant staff in the use and application of the three record and complaint handling computer systems (Customer View, ACCESS and WAMS) and systematically check the effectiveness of that training.

Licence Part 6 - Compliant and Dispute Handling

It is recommended that Sydney Water:

- R6.1 Refine the reports regarding 'complaints to other bodies' to include when claims are commenced, the clause of the Customer Contract to which they relate and the court in which they are commenced.

Licence Part 7 - Environment – Indicators and Management

It is recommended that Sydney Water:

- R7.1 Improves the integration of the Environment Plan with the Business Plans of the Divisions and the Corporation.

Licence Part 9 - Water Conservation and Demand Management

No significant recommendations directly affecting compliance have been 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, Sydney Water provides services to approximately four million customers within the areas of Sydney, the Blue Mountains and Illawarra Regions. The area of operations for which Sydney Water is responsible is shown in Figure 1-1. A schematic representation of the major infrastructure under the control of Sydney Water is shown in Figure 1-2.

1.2 Independent Pricing and Regulatory Tribunal

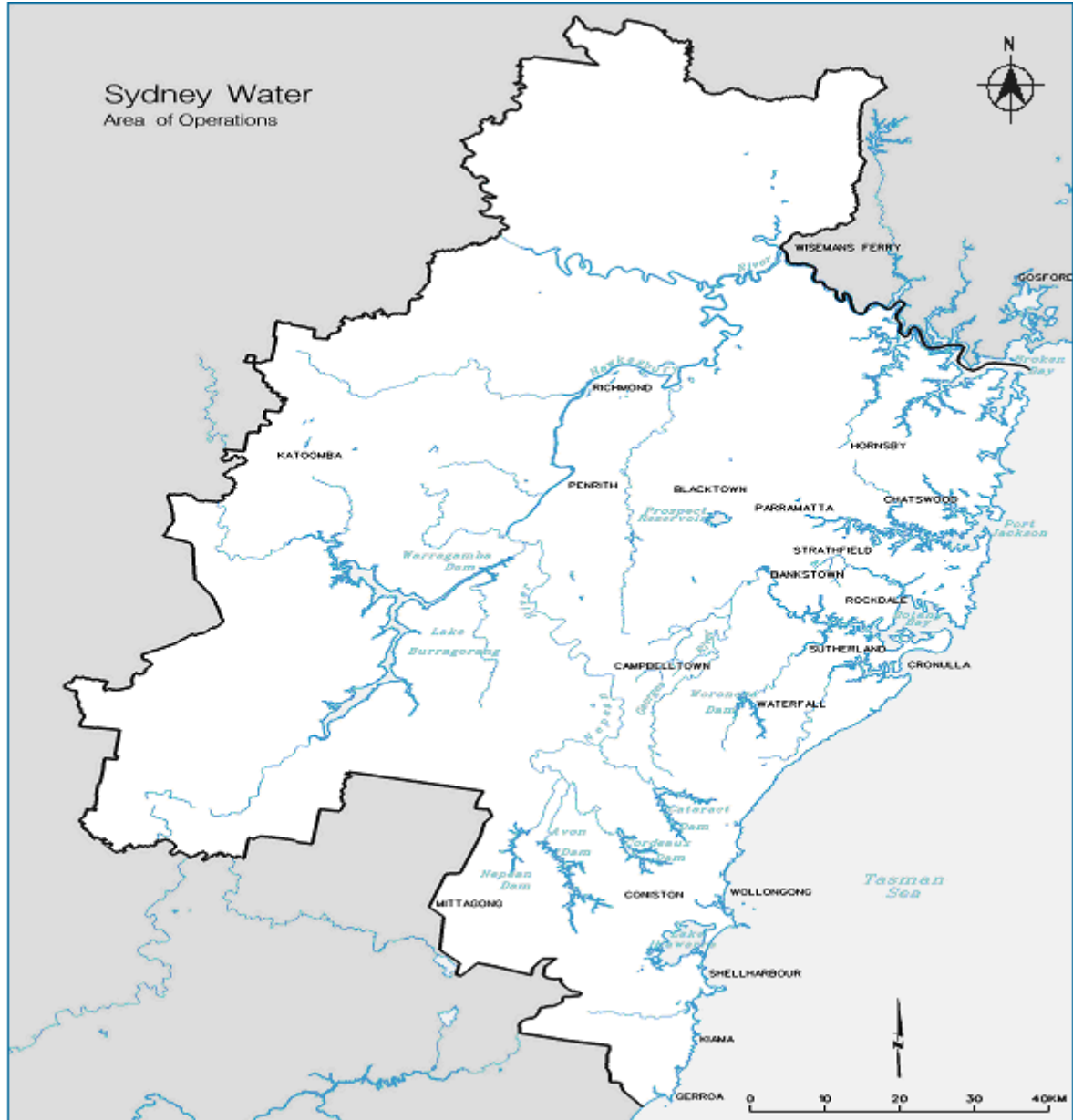
The Independent Pricing and Regulatory Tribunal (IPART) was established in 1992 to regulate the pricing of monopoly services. On 1 November 2000 the NSW Government initiated the *Independent Pricing and Regulatory Tribunal and Other Legislation Amendment Act*, which, under Schedule 1, transferred Licence 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, in association with the Hunter Valley Research Foundation, to conduct the Operational Audit of Sydney Water for the 2005/2006-audit period.

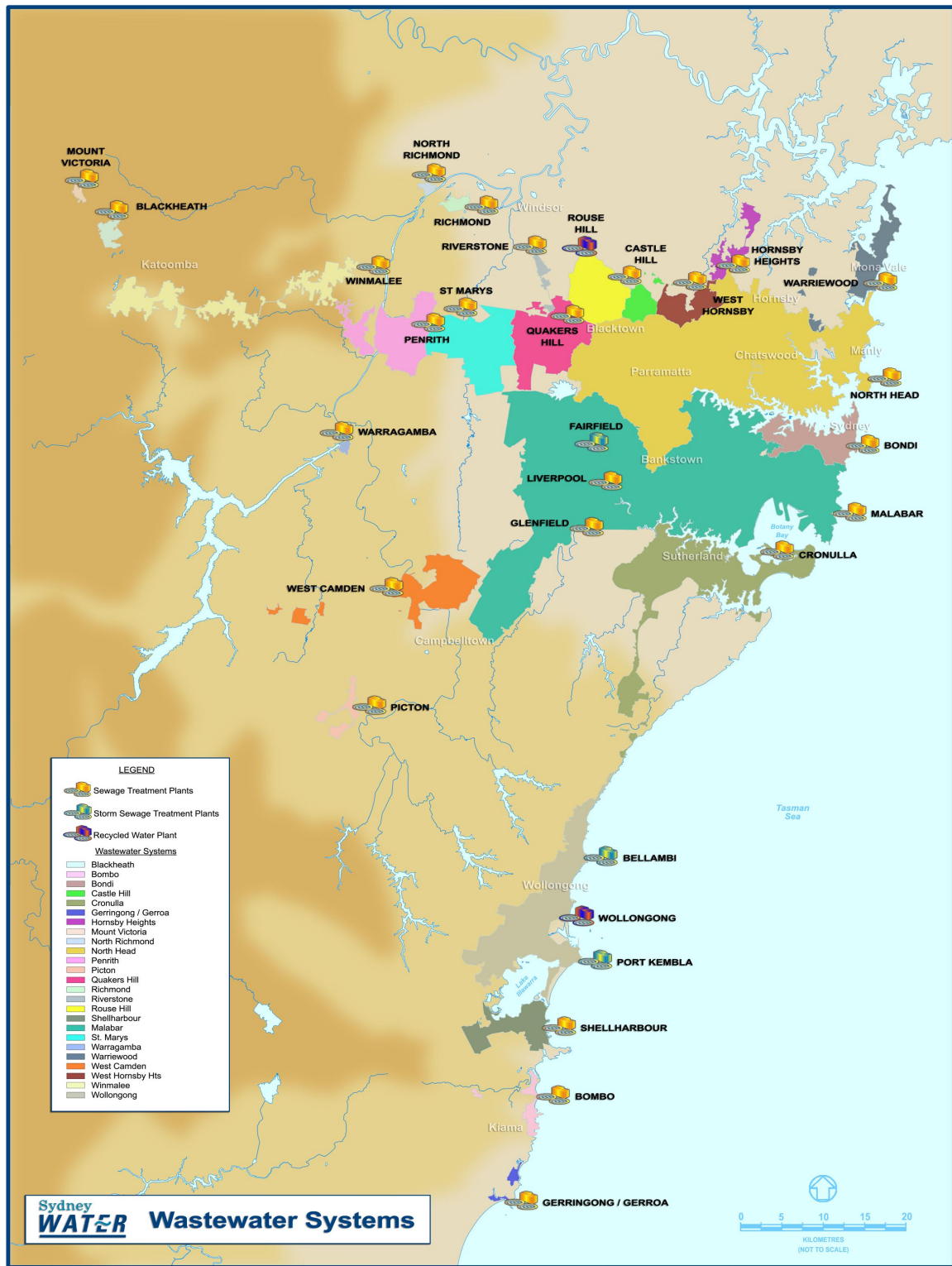
This commission was in accordance with Part 12.1 of the Operating Licence.

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



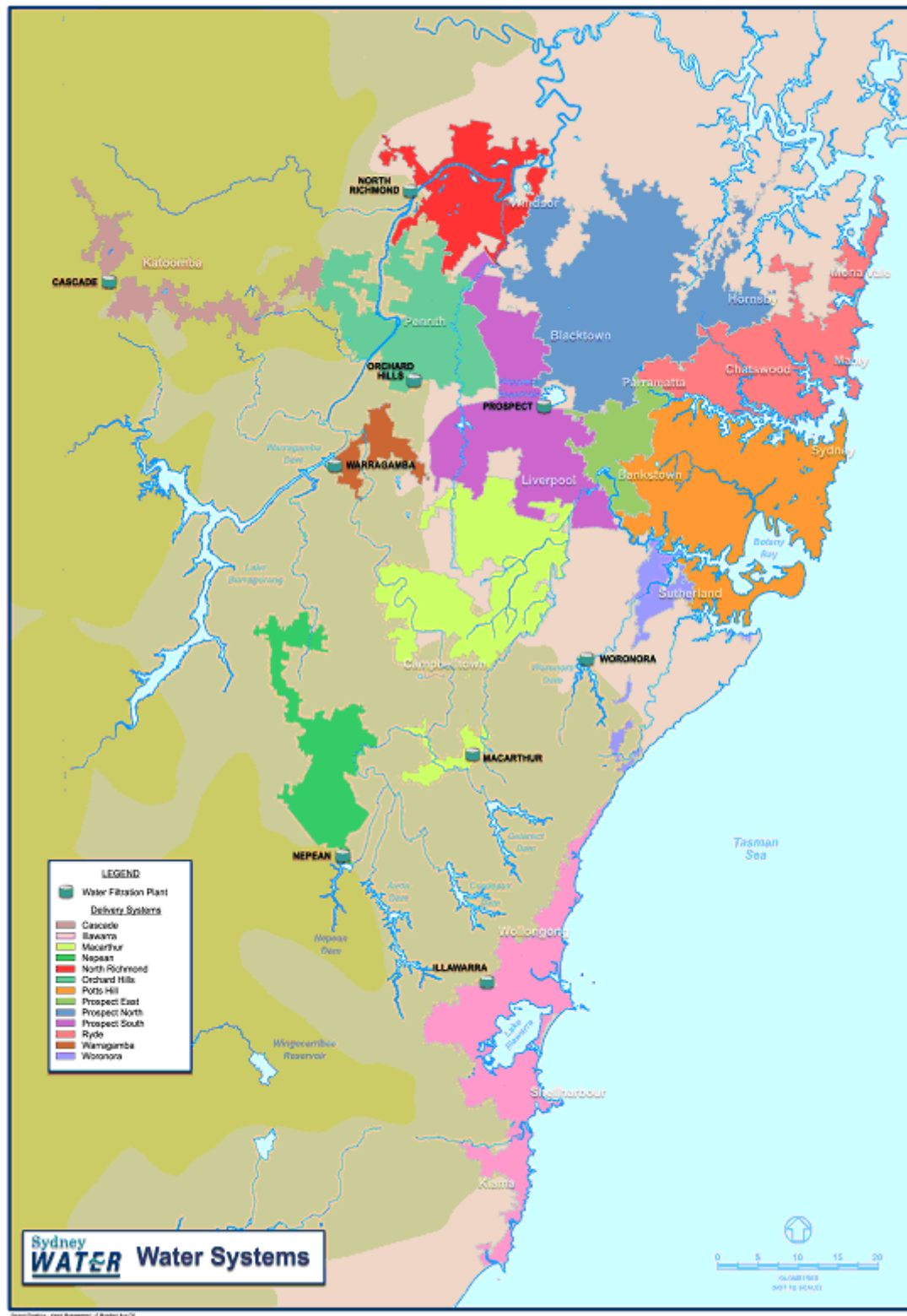
Source: Sydney Water Corporation

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:

- (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 2005/06 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 Performance	Section 6
	Compliance with obligations under Part 5 - Customer and Consumer Rights	Section 7
	Compliance with obligations under Part 6 - Complaint and Dispute Handling	Section 8
	Compliance with obligations under Part 7 - Environment – Indicators and Management	Section 9
	Compliance with obligations under Part 9 - Water Conservation and Demand Management	Section 10
12.2.1 (b)	Implementation of any Memorandum of Understanding	Section 4
12.2.1 (c)	Compliance with the requirements of the Minister for Energy and Utilities resulting from the 2004/05 Operational Audit.	See relevant Licence Part above

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 2005 to 30 June 2006.

1.5 Structure of the Audit Report

This 2005/06 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.

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.

The audit methodology was amended after discussions with IPART. The main changes were:

- » Formal audit interviews were not required for some Operating Licence conditions that were deemed ‘low risk’ by IPART. The audit was based on the written response to the audit questionnaire and supporting documentation;
- » IPART requested the Sydney Water Managing Director to sign off on the comments provided in the second draft audit report; and
- » An additional meeting with Sydney Water, IPART and GHD, at the second draft stage, was needed to respond to the major issues with the draft audit.

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 4 October 2006. IPART representatives also attended the meetings.

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

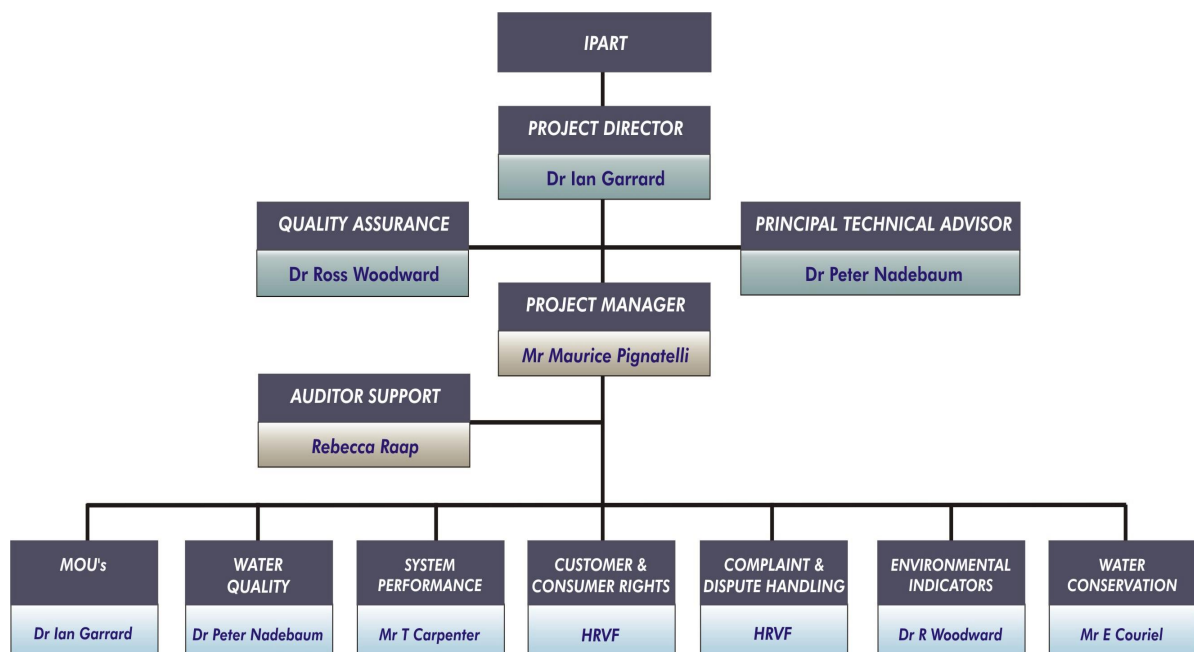
The specialist auditors conducted interviews during October and November 2006. The interviews were generally guided, but not limited, by the pre-prepared questionnaires and Sydney Water was provided the opportunity to present evidence towards demonstrating compliance with the Licence requirements.

An IPART representative also attended the majority of the audit interviews.

2.5 Audit Team

The audit team consisted of specialist auditors from GHD Pty Ltd and Hunter Valley Research Foundation. 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);	» Provisions relating to works;
» The functions of Sydney Water;	» The preparation and implementation of MOUs;
» The area of operations;	» Customer contracts;
» The granting of the Operating Licence;	» Fees and charges;
» The objectives of Sydney Water;	» Management of infrastructure;
» The functions of the Licence Regulator;	» Offences provisions; and
» Environmental management;	» Other miscellaneous matters.
» The Operational Audit;	

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

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 Conservation – DEC).

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
<i>Summary of Ministerial requirements arising from 2004/05 Operational Audit</i>	
MR 4.1	<p>Achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007:</p> <p>(a) 18 flowmeters in 2005/06 and 50 in 2006/07, including 30 renewals</p> <p>(b) 21 pressure zones created by June 2007.</p>
MR 9.1	<p><i>"I require Sydney Water to investigate and implement all feasible options for industrial and domestic reuse. To this end, I require Sydney Water to report to me by 1 September 2006 on its actions during 2005/06 and projected future actions to:</i></p> <ul style="list-style-type: none"> • <i>Implement new recycled water opportunities;</i> • <i>Undertake reuse trials as part of the EDC Business Program;</i> • <i>Release the sewer mining policy;</i> • <i>Identify advancements in recycling technology; and</i> • <i>Assist development of recycling opportunities by third parties."</i>

4. Sydney Water's Responsibilities

4.1 Summary of Findings

» Maintain Memoranda of Understanding

Sydney Water is required to maintain Memoranda of Understanding (MOU) with the Water Administration Ministerial Corporation (WAMC), NSW Department of Health (NSW Health) and Environment Protection Authority (EPA), now part of the Department of Environment and Conservation (DEC), for the term of the Licence. The Operational Audit is to report on Sydney Water's "*implementation*" of any MOU.

Sydney Water exhibited: **Full implementation** of its MOU with NSW Health, which continues to provide a sound model; **Moderate implementation** of the MOU with DEC; and **Low implementation** of the WAMC MOU. Implementation of the MOUs is to similar levels as in previous years. During the year the DEC and WAMC MOUs did not reflect the changed roles and functions of the DEC or the DNR, however, a new DEC MOU was signed on 30 June 2006 and an intention to update the WAMC MOU was also evident.

Overall, Sydney Water's "...*implementation of any Memorandum of Understanding*" (Clause 12.2.1(b)) was rated as **Moderate implementation**.

4.2 Summary of Requirements

Section 35 of the *Sydney Water Act 1994* requires Sydney Water to maintain MOUs with three agencies namely, the Water Administration Ministerial Corporation (WAMC), NSW Health and the EPA (which since September 2003 became part of the Department of Environment and Conservation, DEC), for the term of this Operating Licence. A Memorandum of Understanding is entered into with each of the three agencies and recognises the regulatory role these agencies have with Sydney Water. Should Sydney Water and the respective regulatory agency not be able to agree with the terms of the MOU, then the views of the regulatory agency prevail. Any amendments to the three Memoranda are to be made available for public input through public exhibition and comment (Clause 36).

The 2005-2010 Operating Licence (Clause 2.3.1) recognises the need to maintain the three MOUs. Clause 2.3.2, states that the purpose of the Memoranda is to form the basis for "*cooperative relationships*" between the parties. The respective MOUs are to recognise:

- » NSW Health's role in providing advice in relation to drinking water quality and the supply of safe water;
- » EPA's role as an environmental regulator in NSW and also ensure Sydney Water is committed to environmental improvements; and
- » WAMC's role in regulating water access, use and management and that Sydney Water's right to use water is vested in the WAMC. (Note: Sydney Water is licensed by WAMC (through DNR) for the North Richmond Water Filtration Plant (which draws from the Hawkesbury River), Manly Dam and Botany Wetlands).

Clause 2.3.3 indicates that there is no limit to the persons or regulatory agencies with whom Sydney Water may have a MOU.



Whilst the Operating Licence (Clause 12.2.1) requires the Operational audit to report on Sydney Water's compliance with its obligations under the various Parts of the Licence, in the case of the MOUs, the audit should report (Clause 12.2.1 (b)) on Sydney Water's "*implementation*" of any MOU.

Table 4- 1 Licence Part 2 – Sydney Water’s Responsibilities

Clause	Requirement	Implementation	Findings
2.3 – Memoranda of Understanding			
2.3.1	<p>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.</p> <p><i>[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.]</i></p>	High implementation	<p>MOUs were maintained between Sydney Water and the WAMC, NSW Health and EPA. Operating under current and ‘cooperative’ MOUs is a joint responsibility of Sydney Water and its regulators.</p> <p>In light of Section 35 of the Act, Sydney Water’s performance in ‘maintaining’ the MOU’s is also reliant on the response from the respective regulatory agencies. Sydney Water operated and maintained its MOU with NSW Health, WAMC and EPA over the audit period.</p>
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:	No requirement	
2.3.2(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;	Full implementation	The Strategic Liaison Group and Joint Operational Group have met regularly and form the basis for a cooperative relationship. The minutes of the both SLG and JOG indicate the MOU continued to provide an active forum to identify and coordinate strategic public health issues.

Clause	Requirement	Implementation	Findings
2.3.2(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	Moderate implementation	<p>» The pre-existing MOU operated over year. However, the MOU was revised during 2005/06 to reflect the changed role of the DEC. Both parties signed it on 30 June 2006.</p> <p>» The Chief Executive Officers did not meet under the MOU; the Strategic Liaison Group met on two occasions (three are required); the Joint Operational Policy Committee met on three occasions (MOU requires “at least 4 times”). Participation under the MOU has dropped from the level assessed in 2004/05.</p> <p>One joint forum, a National Parks Working Group, was established.</p>
2.3.2(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.	Low implementation	<p>The MOU with WAMC was signed on 28 June 2002 and whilst its structure forms “the basis for a cooperative relationship”, implementation over 2005/06 has been assessed as low. Extensive reorganisation changes in the (now) host Department of Natural Resources are not reflected in the MOU. The previous years’ low level of activity under the MOU continued through 2005/06. Sydney Water advised that it began to initiate action to update the WAMC MOU late in the Operating year.</p> <p>Over the year, no formal meetings of CEOs, under the MOU took place, no matters were referred by the SLG to a CEO meeting, and no Strategic Liaison Group meetings nor joint forums were held.</p> <p>Interchange has occurred through broader NSW Government initiatives (such as the Drought Executive Committee and Water Sharing Plan).</p> <p>There were exchanges of information and data, (for example, the review under the Water Management Licence and environmental water releases at North Richmond and Manly Dam).</p>
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.	No requirement	<p>Sydney Water has not exercised this clause.</p> <p>However it is noted that the Sydney Catchment Authority (SCA) is a very active member and participant under the DOH’s MOU in both the Strategic Liaison and Joint Operational Groups.</p>
12.2 – What the audit is to report on			
12.2.1 (b)	Sydney Water’s implementation of any Memorandum of Understanding;	Moderate implementation	Overall Sydney Water’s implementation across its three MOUs has been assessed as Moderate reflecting <i>Implementation</i> , which ranged from Full, through Moderate, to Low over the audit period.

4.3 Discussion

Over 2005/06, the Department of Health MOU continued to be implemented in a strategic manner, through the Strategic Liaison and Joint Operational Groups. The activities under the MOU are largely tripartite, with the Sydney Catchment Authority (SCA) being an active participant in both Groups.

The EPA MOU, which commenced in October 2002, also demonstrated activity at both strategic and operations levels, though at a reduced level compared to earlier years. The new MOU, which was signed on the last day of the Operating year, may be the fillip to enhance the activities under the MOU in future years.

The cooperative relationship with WAMC, as driven by the MOU, was low and interaction was more on the basis of NSW Government wide initiatives. Sydney Water has taken initial steps to update its MOU with DNR to reflect the organisational reforms, since 2002, and provide the basis for a cooperative relationship. The effectiveness of these steps will depend on DNR's response, since the views of the regulatory agency prevail.

Each of the three authorities having MOUs with Sydney Water was asked to comment on the MOUs. NSW Health, EPA and WAMC generally indicated a "*satisfactory*" performance by Sydney Water in regards to the MOUs (refer to Appendix H).

4.4 Factors Affecting Implementation

As indicated, the MOUs operating over the audit year with the EPA and WAMC were established in 2002.

The significant changes to the regulatory agencies have occurred over this period, and both MOUs required updating to form a (current) basis for a "*cooperative relationship*". This took place in regard to the EPA MOU at the conclusion of the operational year. Sydney Water has advised, though this will need to be confirmed in the 2006/07 audit, that following public exhibition in December 2006 of a Draft WAMC MOU, agreement has been that the updated WAMC MOU will commenced in March 2007.

Whilst Sydney Water has sought to engage all three of its regulators, the views and priorities of the regulator dominate and affect compliance.

4.5 Recommendations

4.5.1 Key Recommendations

It is recommended that Sydney Water:

- R2.1 Actively pursue the participation of DEC (EPA) and DNR (WAMC) to achieve the *cooperative relationships*, and benefits, as evidenced through the Health MOU.

4.5.2 Secondary Recommendations

It is recommended that Sydney Water:

- R2.2 Update its MOU with Department of Health to reflect the role and involvement of that the SCA is playing under the MOU.

5. Water Quality

5.1 Summary of 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).

» 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 obtained **Full compliance** with respect to the preparation of a *Five Year Drinking Water Quality Management Plan 2005-2010*. This Plan has been prepared with reference to the concepts of good practice in the 2004 *Australian Drinking Water Guidelines*.

» Drinking Water – Incident Management

Sydney Water obtained **Full compliance** with respect to the preparation of a *Drinking Water Quality Incident Management Plan*.

» Other Grades of Water

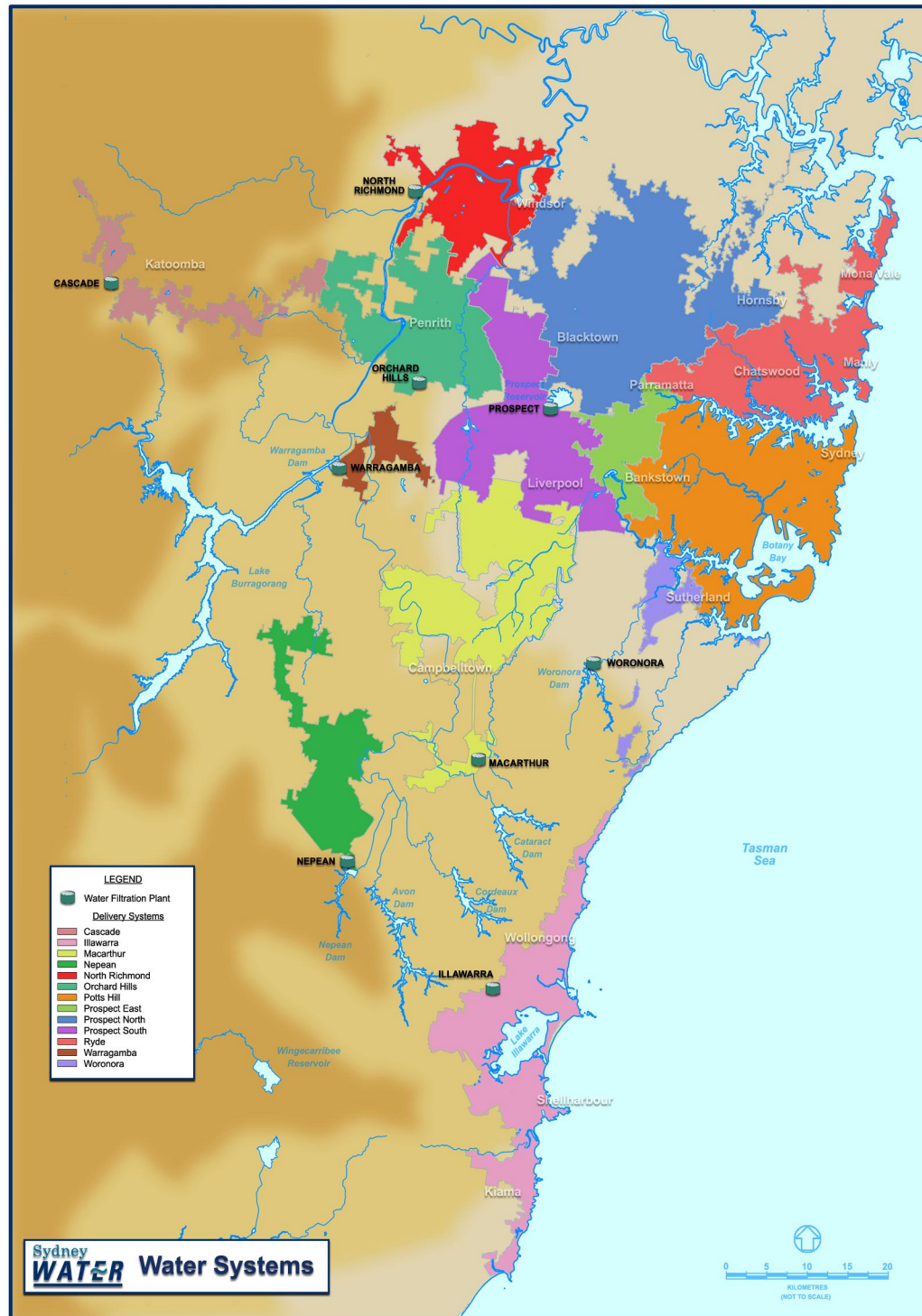
Sydney Water obtained **Full compliance** with the requirements for “supply of other grades of water” for the Rouse Hill recycled water scheme, and other schemes, with the most critical parameters complying with requirements and a continuous program of improvement in place. Two cross connections were identified in the Newington recycled water scheme operated in conjunction with the Sydney Olympic Park Authority. Sydney Water carried out an intensive inspection program to provide assurance that no further cross connections had been made. No illnesses were associated with these cross connections.

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

Delivery System	2002/2003	2003/2004	2004/2005	2005/2006
At least 98% of samples shall contain no Thermo-tolerant Coliforms (or alternatively <i>E. coli</i>) ¹				
North Richmond	100	99.5	99.6	100
Orchard Hills	100	100	99.8	99.8
Prospect South	100	100	100	100
Prospect North	100	99.9	100	99.9
Prospect East	100	100	99.8	100
Ryde	100	100	100	100
Potts Hill	100	100	100	99.8
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	100
Combined Systems	100	99.9	99.9	99.9

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

Figure 5-1 Sydney Water's 13 Water Delivery Systems



Source:

http://www.sydneywater.com.au/Publications/_download.cfm?DownloadFile=FactSheets/SWAssetsWaterCatchmentsFiltrPlantsPumpingStns.pdf

5.2 Summary of Requirements

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

1. Supplies drinking water that is safe and meets appropriate guidelines;
2. Supplies other grades of water in a manner that is safe to the end users and meets appropriate guidelines;
3. Is abreast of emerging water quality issues and engages the community in the development of future water quality goals; and
4. 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:

- » 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; and
- » Supply other grades of water, such as water for reuse, in accordance with relevant guidelines and requirements of government agencies.



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	<p>Sydney Water has adopted the more recent 2004 revision of the <i>Australian Drinking Water Guidelines</i> (ADWG) for compliance purposes, for 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.</p> <p>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 do provide Total Coliform guidelines.</p> <p>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 <i>E. coli</i>, pH and iron; however, these were minor and well within the Guidelines for an excellent water supply.</p> <p>In the case of Total Coliforms, review of the reported results indicates that the water complies with the requirements for ADWG 1996; as noted above ADWG 2004 does not require compliance with Total Coliform guidelines.</p> <p>Sydney Water's reporting of the results compares the measured results with the Guideline level; however, it does not indicate to the reader what percentage of exceptions can be accepted. For example, in the case of <i>E. coli</i> the percentages of exceptions achieved were in the range 0 – 0.2% for the various supplies and it is not clear whether this is acceptable or not (in fact the Guidelines would allow up to 2% exceptions and the results remain in good compliance). It is recommended that in reporting the results Sydney Water should indicate the allowable percentage of exceptions, to assist the reader in understanding the</p>



Clause	Requirement	Compliance	Findings
			<p>results.</p> <p>Review of the records indicates that where exceptions occurred, Sydney Water advised NSW Health and carried out additional check monitoring, as necessary.</p>
3.1.1 (b)	The fluoridation plant operating targets set out in the Fluoridation Code.	Full compliance	<p>The monitoring results show that dosing of fluoride was within the specified range for all systems with the exception of a few occasions where fluoride was dosed at less than the specified range for some systems. 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.</p>
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 compliance	<p>Sydney Water advised that it has been agreed with NSW Health that where an analyte has both a health guideline value and an aesthetic guideline value, then the priority is to meet the health guideline. This situation can arise, for example, in the case of disinfection parameters such as monochloramine and free chlorine where the requirements for adequate disinfection can give rise to taste and odour. Sydney Water advised that it is working to minimise the occurrence of such situations.</p>
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	Full compliance	<p>With respect to adopting the concepts of good practice for water quality management, Sydney Water advised that it is referring to the guidance outlined in the 2004 ADWG, and with agreement by NSW Health, has adopted these Guidelines as the model for best practice. The auditor considers this to be appropriate, as the ADWG 2004 are based on a new framework for assuring water quality that improves upon the 1996 Guidelines.</p> <p>A review of the systems that Sydney Water has in place indicated that the approach being adopted is consistent with the concepts of good practice outlined in the ADWG 2004 (refer to Section 5.4 of this report). In addition, Sydney Water has developed a <i>Five-Year Drinking Water Quality Management Plan (2005 – 2010)</i> in accordance with the new Framework For Management of Drinking Water Quality outlined in the 2004 Australian Drinking Water Guidelines. The new Plan outlines Sydney Water's strategies to maintain current drinking water quality performance and to deal with and manage any emerging water industry issues that may arise over the period of the Plan.</p> <p>With respect to achieving compliance with the health-based guidelines and the aesthetic guidelines, important aspects of Sydney Water's practices include the following.</p> <ul style="list-style-type: none"> » 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



Clause	Requirement	Compliance	Findings
			<p>requirements of the ADWG 2004. This has included the identification of areas of risk to bulk water quality and the requirements to effectively control these risks. Sydney Water and NSW Health also met with SCA to discuss and agree on the bulk water quality characteristics that need to be monitored (Strategic Liaison Group meeting minutes 15 June 2006).</p> <ul style="list-style-type: none"> » 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.
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 compliance	<p>The <i>Annual Drinking Water Quality Monitoring Plan 2005/2006</i> was prepared by Sydney Water and endorsed by NSW Health by 31 March 2005, and the Drinking Water Quality Monitoring Plan for 2006/2007 was prepared by Sydney Water and endorsed by NSW Health by 31 March 2006 (these are referred to as "the Plan").</p>
3.2.1 (a)	Include system performance monitoring and regular sampling, laboratory testing and processes to ensure quality control.	Full compliance	<p><i>The 2006/2007 Drinking Water Quality Monitoring Plan</i> outlines the processes for monitoring characteristics that are required by the Operating Licence or are key characteristics that Sydney Water and NSW Health consider, and agree, provide a suitable indication of system performance required to demonstrate the quality of the drinking water. In general, characteristics are monitored where there is a potential health risk and/or there is a potential for the presence of significant concentrations of the constituent that determines the characteristic. In the case of disinfection, for example, Sydney Water includes in internal operational reports the percentage of time that each of the disinfection systems operate within the range necessary for adequate disinfection. There are also monthly on-line rechlorination plant reports, monthly Water Filtration Plant reports, and graphs of disinfection performance by delivery system.</p> <p>The Plan includes regular sampling, laboratory testing and processes to ensure quality control. In particular, Sydney Water Analytical Services and the Field Services perform the sampling and analysis outlined in the Plan. Analytical Services and Field Services groups have a Quality Management System certified to AS/NZS ISO 9001:2000, as part of Sydney Water's Monitoring Process Management System, that covers relevant processes, systems and documents required in the provision of its key services. They are accredited with the National Association of Testing Authorities (NATA) to perform laboratory based analytical work and field sampling and testing,</p>



Clause	Requirement	Compliance	Findings
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 compliance	The Plan includes the concepts of good practice set out in the ADWG 2004. The basis for this is explained in the Five-Year Drinking Water Quality Management Plan 2005 – 2010. This is discussed in Section 5.4 of this report. NSW Health has advised that the Plan meets its requirements and is in full compliance with the requirements of the Operating Licence.
3.2.1 (c)	Include the monitoring of Health guideline values	Full compliance	The Plan includes the monitoring of water quality characteristics for comparison with the Health guideline values. The auditor notes that the monitoring does not include requirements for monitoring Total Coliforms for compliance (although Sydney Water continues to monitor Total Coliforms for operational purposes); this is in accordance with ADWG 2004 and has been agreed by NSW Health.
3.2.1 (d)	Include the monitoring of Aesthetic guideline values.	Full compliance	The Plan includes the monitoring of water quality characteristics for comparison with the Aesthetic guideline values.
3.2.1 (e)	Assess the quality of water in Sydney Water's water supply system.	Full compliance	The Plan includes the monitoring of water quality in the distribution system and allows the assessment of water quality.
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 compliance	The monitoring outlined in the Plan has been carried out for the period to 30 June 2006 and is continuing.
3.2.2	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>Review of the sampling frequencies and locations chosen for monitoring indicates that they are generally in keeping with the recommendations in the ADWG 2004 and ADWG 1996.</p> <p>In particular, for example, the sampling regime adopted by Sydney Water exceeds the minimum number of samples specified in the ADWG 2004 (Section 10.2.4 of the Guidelines) for microbiological monitoring, for each water delivery system.</p> <p>Sydney Water advises that it selects sample sites throughout the distribution systems with sites selected in each water supply zone with the objective of ensuring that the sites monitored are representative of the quality of water supplied to all consumers. Samples are collected from the front tap (nearest the water meter) at the properties selected. Review of the Sydney Water basis for selection of sites and comparison with the requirements outlined in ADWG 2004 Section 9.6.3 relating to selection of sites and indicates that the selection basis includes both through dead end and recirculating mains in proportion to the rate at which these occur in the distribution system, and the selection basis is in accordance with ADWG 2004.</p> <p>In assessing Sydney Water's sampling program, it is noted that Sydney Water distinguishes</p>



Clause	Requirement	Compliance	Findings
			<p>“water delivery systems” (such as the North Richmond system) and within each system, “reservoir zones”. The number of samples is based on the population served in each reservoir zone, with a minimum of nine locations selected in each water delivery system and a minimum of two locations in each reservoir zone, irrespective of the population. Based on this process, Sydney Water calculates the total number of sites in each delivery system using the sample sites in the associated reservoir zones. Where the number of sites falls below the minimum number required by the ADWG 2004, Sydney Water chooses additional sample sites at random from the reservoir zones with larger populations until the required number is reached.</p> <p>Sydney Water advised that the sample sites within each reservoir zone and delivery system are reviewed annually as part of the review of the monitoring plan.</p>
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	<p>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.</p> <p>In the case of Total Coliforms, the quarterly report to 30 June 2006 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). The auditor notes that the quarterly report for the period to 31 December 2006 does include a listing of Total Coliform results (not for compliance).</p> <p>(Note: that in previous years there was a requirement for an Annual Report rather than the quarterly reports, and Sydney Water also provided summaries of monitoring results for particular parameters on its website).</p>
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 compliance	<p>Sydney Water provided a copy of the reports compiled under Clause 3.3.1 to NSW Health.</p> <p>Where exceptions occurred and this constituted an incident, the reporting provided by Sydney Water indicated that NSW Health was advised, and was kept advised, until the issue was resolved. NSW Health advises that it considers that Sydney Water is in compliance with the requirements.</p>



Clause	Requirement	Compliance	Findings
	[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	<p>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.</p> <p>[Note: Under section 10H of the Public Health Act 1991 the Director General of NSW Health may require Sydney Water to produce certain information.]</p>	Full compliance	<p>Sydney Water meets regularly with NSW Health and SCA (for example the Joint Operational Group) and, based on the minutes of meetings, Sydney Water demonstrated a close working relationship with NSW Health. There is free exchange of information 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.</p> <p>NSW Health advised that requests were made by NSW Health for information during investigations of several incidents including the detection of <i>E. coli</i> in treated water samples, a break in at a reservoir, and widespread taste and odour complaints in April 2006, and that Sydney Water provided the requested information in an appropriate form.</p>
3.4 – Drinking Water – Planning			
3.4.1	<p>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.</p>	Full compliance	<p>Sydney Water has prepared a <i>Five-Year Drinking Water Quality Management Plan 2005-2010</i>. The Plan was signed off by NSW Health on the 29 November 2005 in compliance with the timing requirement. A copy can be accessed via the Sydney Water website.</p> <p>A discussion paper was prepared and approved by Sydney Water's Executive in August 2005. The discussion paper reflects the approach taken in the Five-Year Plan. The discussion paper notes Sydney Water's good performance with regard to water quality. The paper also notes Sydney Water's commitment to continue to supply safe drinking water to consumers, along with the capability to effectively respond to incidents and emerging water quality issues that may arise over the next five years. Input to the discussion paper was provided by relevant specialists in Sydney Water, the Water Unit of NSW Health, and the SCA. As part of the public consultation process, advertisements were placed in major newspapers on Wednesday 24 August and Saturday 27 August 2005 to notify the community and stakeholders of the discussion paper's availability and to invite submissions and comments. The closing date for all written submission was 14 September 2005.</p> <p>Copies of the discussion paper were made available in brochures and an electronic copy could be downloaded via Sydney Water's website. Copies were also mailed directly to appropriate external stakeholders, seeking submissions and comments. A 'hotline'</p>



Clause	Requirement	Compliance	Findings
			telephone number and a web-address were established for this public consultation process. Sydney Water advised that all respondents (listed in Table 8 of the Five-Year Plan) were replied to in writing to acknowledge their contribution to the preparation of the <i>Five-Year Drinking Water Quality Management Plan 2005-2010</i> .
3.4.2	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>The Five-Year Plan 2005-2010 sets out Sydney Water's strategies to ensure that the quality of drinking water supplied in Sydney, Illawarra and the Blue Mountains continues to meet regulatory requirements and consumer needs, and that systems and processes are in place to address any emerging water quality issues.</p> <p>The Plan has been formulated on the basis of identifying and managing water quality risks, both with respect to protecting human health and in meeting aesthetic guideline values. The Plan builds on a program of risk assessment carried out jointly by Sydney Water, SCA and NSW Health.</p>
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 compliance	<p>The Plan includes a discussion of the ADWG 2004 and has considered the concepts of good practice embodied in the Guidelines. Refer to discussion in Section 5.4 of this report.</p> <p>NSW Health advises that it considers the Plan, appropriately, takes account of the concepts of good practice in the Framework for the Management of Drinking Water Quality, ADWG 2004, and that NSW Health has approved the Plan.</p>
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:	No requirement	The first annual status report for the 2005-2010 Five-Year Plan was due in October 2006. While not required during the 2005/06 audit period, Sydney Water had prepared the Report and it was sighted by the auditor. NSW advises that the report is in accordance with the requirement.
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.	No requirement	
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.	No requirement	



Clause	Requirement	Compliance	Findings
3.5 – Drinking Water – Incident Management			
3.5.1	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>Sydney Water has established a secure On-line Incident Reporting website as per the Sydney Water Water Quality Event Management Standard Operating Procedure. This website is used to share information with NSW Health and SCA on incidents or events related to public health. This system has been in successful operation for several years. The auditor reviewed the system and its operation.</p> <p>Sydney Water has carried out risk assessments of its various treatment and distribution systems in conjunction with SCA and NSW Health, and meets regularly with SCA and NSW Health to discuss and share information on risks to water quality.</p> <p>NSW Health advises that Sydney Water has complied with the agreed protocol on reporting to NSW Health on events in the drinking water supply that might affect public health, by telephone, and through the on-line notification system.</p>
3.5.2	<p>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.</p>	Full compliance	<p>The Incident Management Plan comprises the Emergency Response Handbook and the <i>Water Quality Event Management Standard Operating Procedure</i> (SOP). The Plan was endorsed by NSW Health on 12 August 2002. The Event Management SOP has been amended a number of times; each revision has been endorsed by NSW Health. The Event Management SOP was most recently amended in December 2004 following Exercise Camel. A copy was forwarded to NSW Health on 6 December 2004 for its review and endorsement. NSW Health was satisfied with the revised SOP and it has been finalised.</p> <p>Sydney Water advised that the Water Quality Event Management SOP is being reviewed to reflect the adoption of the ADWG 2004. The ADWG 2004 recommends that <i>E. coli</i> (or thermotolerant coliforms) is the most suitable indicator organism for the possible presence of pathogens arising from faecal contamination. Therefore, <i>E. coli</i> will be the indicator organism to be routinely monitored and reported on for compliance. Sydney Water advised that total coliforms will no longer be recognised as a suitable indicator organism and will have reduced significance for event management.</p> <p>NSW Health advises that it considers that the Incident Management Plan has been maintained satisfactorily.</p>
3.5.3	<p>The Incident Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of Drinking water incidents including media</p>	Full compliance	<p>The Incident Management Plan which includes the <i>Water Quality Event Management Standard Operating Procedure</i> contains the required procedures and protocols.</p>



Clause	Requirement	Compliance	Findings
	and stakeholder liaison and any notification to Consumers of public health advice received from NSW Health.		NSW Health advises that it considers that the Incident Management Plan addresses the specified issues.
3.5.4	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>The ADWG 1996 outlines general requirements for event reporting (Section 6.6.1) situations requiring public notification (Section 6.6.6). The Incident Management Plan and management systems that have been implemented by Sydney Water comply with these requirements.</p> <p>As noted in Clause 3.1.3, Sydney Water considers guidance relating to good practice in management of water supplies as outlined in the ADWG 2004. The requirements of ADWG 2004 go beyond the requirements of ADWG 1996. Key requirements of the ADWG 2004 relating to incident management plans include the specification of:</p> <ul style="list-style-type: none">» Response actions, including increased monitoring;» Responsibilities and authorities internal and external to the organization;» Plans for emergency water supplies;» Communication protocols and strategies, including notification procedures (internal, regulatory body, media and public); and» Mechanisms for increased health surveillance. <p>The SWC Incident Management Plan (including the Emergency Response Handbook and the <i>Water Quality Event Management Standard Operating Procedure</i> (SOP)) meets these requirements. The Incident Management Plan has been reviewed and endorsed by NSW Health, which advises that it considers that the Plan takes account of the concepts of good management outlined in ADWG 2004. Sydney Water has developed an Online Incident Notification System, which forms the basis of reporting incidents and formal interactions that occur during an incident.</p> <p>With respect to plans for emergency water supplies, SWC has prepared a <i>Water Continuity Plan 2004</i> which outlines its approach in this regard, and a SOP <i>Identification of Alternative Water Supplies</i> WP-QMSO329.</p> <p>In respect to providing for increased health surveillance, requirements are not defined in advance in the documentation. Sydney Water advises that any such requirements will be determined at the time of an incident and will be documented as part of the Online Incident Notification System, and that its Drinking Water Standby service which operates on a 24 h / 7 day a week basis can also be used to provide additional surveillance.</p>



Clause	Requirement	Compliance	Findings
			<p>In terms of applying the Incident Management Plan, the key requirements of the Guidelines include:</p> <ul style="list-style-type: none"> » Defining potential incidents and emergencies and documenting procedures and response plans with the involvement of relevant agencies; » Training employees and regularly testing emergency response plans; and » Investigating any incidents or emergencies and revising protocols as necessary. <p>Sydney Water carried out these activities.</p>
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 compliance	<p>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),</p> <p>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:</p> <ul style="list-style-type: none"> » NSW Recycled Water Coordination Committee <i>"NSW Guidelines for Urban and Residential Use of Reclaimed Water"</i> 1st Edition, May 1993 (for example, for Rouse Hill Recycled Water Scheme); » National Water Quality Management Strategy (ARMCANZ, ANZECC, NHMRC) <i>"Guidelines for Sewerage Systems – Use of Reclaimed Water"</i>, November 2000 e.g. for golf courses and some industrial applications; and » DEC (NSW) Environmental Guidelines <i>"Use of Effluent by Irrigation, October 2004"</i> (for example, for golf course and agricultural irrigation). <p>Sydney Water has a standard operating procedure (WPIMS5330.SOP) on <i>"Reporting Water Quality"</i> to address recycled water quality measurement and reporting under its ISO 9001:2000 certified Water Product Integrated Management Systems.</p> <p>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</p>



Clause	Requirement	Compliance	Findings
			<p>principles. Sydney Water has implemented a Water Product Management System complying with the requirements of ISO 9001:2000, Sydney Water uses NATA accredited laboratories, and Sydney Water has prepared in draft form a formal <i>Other Grades of Water Quality Monitoring Plan</i> for 2005/06.</p> <p>In 2005/06 the monitoring data tabulated in the Annual Compliance reports showed:</p> <ul style="list-style-type: none"> » 100% compliance for the irrigation and agricultural schemes; and » 100% compliance for the Rouse Hill scheme. <p>In particular, it is noted that the <i>E. coli</i> 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 the recycling schemes have complied with the relevant guidelines, and that reports on operation of the schemes are sent to NSW Health or reported directly through the on-line notification system.</p> <p>Sydney Water has had involvement as a supplier of potable water in a Sydney Olympic Park Recycled Water Scheme at Newington. It was found that two cross connections between the recycled water supply and the potable supply had occurred, and Sydney Water carried out a re-inspection of main-meter-house and customer house fittings. Although, it appears that both cross connection and consumption of recycled water had occurred, it had not led to illness because of the high quality of the recycled water. The auditor is impressed with the level of effort put in by Sydney Water staff in ensuring property safety.</p> <p>Further discussion on the supply of other grades of water is included in Section 5.6.</p>
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

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.

Information provided by Sydney Water in the *Five year Drinking Water Quality Management Plan 2005 – 2010* on customer satisfaction and customer complaints supports the conclusion that the water is of an excellent quality: the percentage of customers that were satisfied with the quality of the water in 2005 was 91%; and higher than in the previous 12 years over which data have been provided. Similarly, the number of customer complaints regarding water quality is at a low level and is the lowest over the period data has been provided.

5.4.2 New Guidelines for Drinking Water Quality

The Operating Licence requires compliance with the ADWG 1996; however, the definitions in the Licence include the provision that compliance is to be with the ADWG 1996 “*as amended or updated from time to time and adopted by NSW Health from time to time*”. As noted in the Memorandum of Understanding with NSW Health: “*the NSW Government has endorsed the 2004 Guidelines as a model for best practice. The Corporation is to have regard for the 2004 Guidelines and any updated Guidelines when conducting its water supply activities*”. Sydney Water has adopted the *Australian Drinking Water Guidelines 2004* for compliance purposes; this is in accordance with the Licence and agreement with NSW Health. In carrying out this audit, reference has been made to the requirements of both ADWG 1996 and 2004, with primary consideration being given to measuring compliance against the ADWG 2004.

While the new Guidelines do not introduce significant change with respect to individual chemical constituents of water, it does introduce significant change in other respects, compared to the 1996 guidelines, as outlined below.

- » The 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.
- » The 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.

The new Framework is based on the principles of *Hazard Analysis and Critical Control Points* (HACCP) used widely in the food industry. A review of Sydney Water's systems against the 12 elements of the Framework has been carried out and summarised in Table 5-3. This review has drawn on information provided by Sydney Water in the *Five Year Drinking Water Quality Management Plan 2005 – 2010*, and other information provided to the auditor in the course of this, and previous, Operational Audits.

While not a detailed review, it does show in broad terms that the Sydney Water's drinking water quality management system is in good agreement with the requirements of the Framework.

Table 5-3 Consistency of Sydney Water Systems with the new Framework in ADWG 2004

No.	Component	Sydney Water Systems and Approach
1	Formulate drinking water quality policy; ensure regulatory requirements are met; engage stakeholders	Water Product Integrated Management System certified to ISO 9001 (includes policy statement); register of key regulatory requirements; engagement with stakeholders relevant to drinking water quality requirements
2	Analysis of water supply system; assessment of water quality data; hazard identification and risk assessment	Continuing review of water supply systems; maintenance of tools for monitoring and assessment (such as IICATS, Water Quality Information Tool, hydraulic and water quality models); comprehensive database of water quality information; regular reviews of water quality information; established process of hazard identification and risk assessment from catchment to tap; continuing program of water quality improvement; close involvement with SCA to understand and assure quality of bulk water; independent review by Expert Panel.
3	Establish preventive measures and multiple barriers; identify critical control points and ensure control	Sydney Water has a well established system of multiple barriers and preventive measures to protect drinking water quality; Sydney Water works jointly with SCA where these are related to assuring bulk water quality; Sydney Water works jointly with its water treatment plant operators to assure the treatment process (including maintaining objective to meet 0.1 NTU at outlets of all WFPs); application of HACCP principles to assess preventive measures identify critical control points, and establish critical control limits and responsibilities.
4	Identify and implement operational procedures; carry out operational monitoring; apply corrective action; ensure equipment is capable and is maintained; ensure materials and chemicals are appropriate;	Continue to maintain and apply its existing system of Standard Operating Procedures for water filtration and water distribution system activities and agreements (such as the Bulk Water Supply Agreement); continue with preparation and application of Annual Water Quality Monitoring Plan; continue <i>Cryptosporidium</i> and <i>Giardia</i> monitoring plans and revise these plans as necessary; maintain Water Quality Incident Management Plan and SOPs relating to management of water quality excursions and incidents; maintain existing water quality information database and communications tools; maintain existing treatment and distribution system; maintain existing system of Service Level Agreements to maintain equipment and systems; use only chemicals approved for use in water treatment in accordance with QA procedures.
5	Monitor drinking water quality; establish system to record customer complaints; carry out assessment of results (including both short term information and longer term trends); carry out corrective actions	Continue process of developing water quality monitoring plans and monitoring; continue to use NATA accredited laboratories; Customer Contract in place; customer complaints handling process in place; system for short term evaluation of data is in place; Actions Database is in place to report daily monitoring of data and carry out notifications; procedures are in place to handle water quality non-conformances.
6	Establish communication protocol and public and media communications strategy; establish incident and emergency response protocols	Communication and response protocols are in place; comprehensive emergency risk management program is in place, including Emergency Control Centre, Emergency Communication Manual and Corporate Media Policy and Guidelines; Emergency Risk Management Guide and Policy is in place; Drinking Water Quality Incident Management Plan is in place; Drinking Water Quality On-line Notification and Reporting system is in place; training program on emergency response is in place.
7	Training and awareness programs for staff	Comprehensive awareness program is in place; training programs are in place including Water Product Integrated Management System Skills Matrix Database to monitor training.
8	Community consultation; communication	Community consultation policy and guidelines are in place;

	program	consultation is targeted to assist in developing appropriate plans and strategies and on key decisions relating to projects; mechanisms for communicating with customers are in place.
9	Research and development; validation of processes; design of equipment	Sydney Water has active research and development programs in place; Sydney Water validates its processes, procedures and design of plant and equipment through established processes and research, where necessary.
10	System for management of documentation and records, and reporting	Sydney Water has established system for managing documentation and records; program of reporting in accordance with requirements both internally and externally is in place; Water Product Integrated Management System is in place and accredited to ISO 9001 that includes systems for documentation and reporting.
11	Evaluation and audit	Sydney Water evaluates data and information relating to water quality and produces the Annual Drinking Water Quality Monitoring Plan and the Five Year Drinking Water Quality Management Plan that include summaries of these evaluations; Sydney Water is subject to external audit; processes have been established in the Integrated Management System for scheduling, management and reporting of internal and external audits and their findings and requirements.
12	Review and continual improvement; drinking water quality improvement plan	Sydney Water has a system in place for the involvement and review of audits and reports by senior management; Sydney Water produces Five Year Drinking Water Quality Improvement Plan.

The particular emphasis of the new Guidelines is on identifying the critical control points in the water supply system, and ensuring that control is maintained. This emphasis reduces reliance on water quality monitoring. The reduction was an important principle underlying the introduction of the new Framework, as otherwise water authorities may have been required to carry out onerous monitoring to confirm the absence of pathogens such as *Cryptosporidium*. As such, an important part of a management system under the new Framework is the identification of Critical Control Points, the control limits that apply to each of these, the validation of these control limits, and the monitoring and verification to demonstrate that control is maintained at each critical point. An example of such a Critical Control Point could be disinfection: control limits are established for disinfection (for example to ensure that the disinfectant dose is adequate) and operational monitoring is then carried out of the performance of the system to ensure that disinfection is maintained on a continuous basis without interruption even for a short time.

In its reporting to the public and to NSW Health, Sydney Water provides summary tabular information on distribution system water quality characteristics and some other data on raw water quality. The selection of parameters and indicators for monitoring and verification purposes is consistent with the requirements of ADWG 2004 as agreed with NSW Health.

Sydney Water advises that it carries out a great deal of other monitoring for operational purposes including monitoring to ensure that targets relating to critical control points are being met. The results of this work are reported, operationally, for example, Action Database reports, IICATs charts, and monthly Water Filtration Plant reports. Some of this operational reporting can provide an excellent level of assurance that safe operation is maintained (such as confirming the absence of outages in the operation of disinfection systems that could compromise disinfection efficiency) and, as such, could be included in reporting to demonstrate that a consistently safe water quality is being achieved. However, this is not a requirement of ADWG 2004 or ADWG 1996 and is not necessary for compliance purposes.

With respect to confirming that the drinking water management system complies with the requirements of the Framework outlined in ADWG 2004, Sydney Water has participated in a pilot study with the Water Services Association of Australia in March 2006. The study involved the application of a Water Quality Framework Continuous Improvement Tool that has the objective of assisting water authorities efficiently assess their water quality management system processes against the 12 Elements of the Framework. Sydney Water advises that the trial showed that the Sydney Water drinking water quality management systems were robust in meeting the 12 elements of the Framework, that only minor gaps were identified, and that NSW Health supports Sydney Water's current management system arrangements for drinking water. It is possible for water authorities to obtain formal certification that their systems comply with HACCP (similar to certification that a management system complies with ISO 9001 or ISO 14001); however, ADWG 2004 does not require such certification and Sydney Water has chosen to not seek HACCP certification. Notwithstanding this, there could be advantage for Sydney Water to obtain an independent detailed review to confirm that Sydney Water's management systems comply with the requirements of the new Framework, although this would be a matter for Sydney Water to decide.

(Note: while this audit has reviewed Sydney Water's management systems against the broad requirements of the new Framework (Table 5-3) and found good agreement, it has not been carried out at the detail that would be required for certification, for example).

5.4.3 Water Quality Risks and their Management

There has been ongoing consideration by Sydney Water as to whether variations in bulk raw water quality, such as may occur with drought breaking rains, do not pose a risk to consumers. These were discussed in previous Operational Audits and, despite some areas where further improvement is possible, the documentation provided evidence that Sydney Water has in place a program of continuous improvement in water quality. The extent to which Sydney Water has identified issues and has systems in place to address these issues is substantial.

In the previous Operational Audit, comment was made on correcting and making more consistent the terminology used in risk assessment, so that it could be confirmed that the residual risk (that is after application of proposed controls) is acceptable. Reference to the reporting on high risk issues in the *Five Year Drinking Water Quality Management Plan 2005 – 2010* suggests that this is being addressed.

Sydney Water advised that it is enhancing this program of continuing improvement and is commencing a project with the cooperative relationship between Sydney Water and the BOO partners to stress test certain treatment plants, and to assess the ability of the plants to respond to excursions in raw water quality and the throughput that can be maintained. This is important, as it will assist in reducing an area of uncertainty that could affect future compliance and water quality.

5.4.4 Joint working with NSW Health and SCA

It is clear from the information provided to the auditor that Sydney Water continues to maintain a good working relationship with NSW Health. This relationship provides confidence that issues requiring joint consideration by these organisations, will be properly dealt with. SCA also participated in a number of Sydney Water and NSW Health meetings and activities.

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. There has not been a Trial Incident since 'Exercise Camel' in 2003/04, and Sydney Water advised that it has been undertaking planning for a major exercise 'Exercise Olive' which is now planned for November 2006. It is understood that this exercise will include trialling response to a bulk water quality incident relating to the onset of drought breaking rains.

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

Sydney Water has prepared a *Five Year Drinking Water Quality Management Plan 2005 – 2010*. This document provides a comprehensive 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. Under the Operating Licence, Sydney Water will report on the implementation of the Plan; this will be an important aspect of maintaining continuous improvement in water quality and should form a point of particular consideration in future audits.

SWC also has prepared and made available to the auditor a report outlining the works carried out in implementing the *Five Year Drinking Water Quality Improvement Plan*. This report was prepared in October 2006 and falls outside the audit period, and is to be subject to review in the 2006/2007 Operational Audit. However, an initial review of this report suggests that it is an impressive document, and indicates that SWC has carried out a considerable body of work that can be expected to lead to improved water quality.

It is noted that in accordance with its drought protocol, Sydney Water continues to adopt the policy of not carrying out mains cleaning and swabbing of the distribution systems, other than reactive flushing on a 'as needs' basis. Sydney Water advised the auditor that there is no evidence that this will result in an accumulation of material in the mains or in increased levels of dirty water in the future, and the continuing good performance with respect to complaints related to aesthetic water quality supports this. Sydney Water regards this to be sound practice in view of the high quality of treated water and low level of suspended solids in the reticulation system.

Notwithstanding this, Sydney Water advised the auditor that the change in the mains cleaning and swabbing policy has resulted in longer detention times and increased numbers of pH exceptions in the water delivery systems. An investigation was undertaken and the pH set point at the outlet of the WFPs has been reduced. This has been successful in reducing the number of pH exceptions. Sydney Water advises that it is keeping a watching brief in relation to the pH issue.

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 off site reuse, increasing from 2,953 ML/year in 2002/03, to 3,473 ML/year in 2005/06. There was some fluctuation from year to year, largely as a result of seasonal and rainfall influences.

Sydney Water is undertaking a range of initiatives to increase the extent of off site reuse and reduce demand on the potable water resource. These various initiatives are outlined in a *Report on Recycled Water Implementation* dated 1 September 2005 and more general information is included in the Sydney Water report *Water Conservation and Recycling Implementation Report 2005-2006*. These initiatives include new schemes, expansion of existing schemes, new technology including improved disinfection practices and other practices, such as, improving system control to decrease the use of potable water to “top up” the Rouse Hill recycled water.

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 listed in Table 5-3). The various guidelines have some degree of overlap in their application and each has been developed in consultation with relevant government, industry and community stakeholders, including Sydney Water. Sydney Water has prepared documentation outlining the hierarchy of the various guidelines and has carefully considered their requirements. Sydney Water has also had ongoing representation on committees, such as the NSW Recycled Water Coordination Committee (now disbanded) that influence the development of appropriate guidelines for other grades of water. (Note: The Guidelines are currently under review at both State and National levels, and a set of *National Guidelines for Water Recycling – Managing Health and Environmental Risks* is currently being developed). Sydney Water advised that it has representation on the review committee for these Guidelines. These new Guidelines will be comprehensive and it is not clear whether all of the requirements now being considered will be met by Sydney Water, although Sydney Water advised that it has carried out an informal review of the new guidance and expects to comply. By way of example, the draft guidelines consider issues such as the potential for overloading and waterlogging of soil to occur, which is a function of soil type and application rates rather than water quality.

5.6.3 Performance

Comment is provided in Table 5-3 on the methods that Sydney Water applies in assuring performance and the performance that Sydney Water achieved. In 2005/06, 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.

It is noted that the monitoring is necessarily limited in terms of the numbers of samples taken and analysed, and the monitoring results provide only a limited view of performance. Instead, assuring the safe supply and use of recycled water relies on the establishment and good operation of an appropriate management system. In this respect, Sydney Water has established such a system, which includes a Water Product Management System, complying with the requirements of ISO 9001:2000.

The safe use of recycled water relies not only on the quality of the water supplied, but also on the user and the user's management practices. In this regard, as part of its overall objective of ensuring the safe use of other grades of water, Sydney Water has taken the initiative of providing information to all users and prospective users of recycled water, including the following.

- » In the case of irrigation, agricultural and industrial application schemes, Sydney Water provided information on advisory signage, material safety data sheets (MSDS) and guidance in preparing site specific Reclaimed Water Management Plans. Sydney Water also provided ongoing support to the operators of all such schemes.
- » In the case of residential recycled water, Sydney Water provided information kits, including Fact Sheets, to all customers prior to the commissioning of a residential recycled water supply scheme. These kits were also made available at Display Homes and Real Estate Agencies for prospective homebuyers in the area, were mailed to new residents on change of property ownership, and are available through the Sydney Water website.

The difficulty in assuring safe performance of recycled water schemes is evidenced in the occurrence of cross connections between potable water and recycled water at the Sydney Olympic Park Recycled Water Scheme at Newington, as noted in Table 5-3. Ultimately, ensuring safe operation relies on providing good quality recycled water such that, should ingestion of recycled water occur, it is unlikely to give rise to detectable health effects. The auditor notes that the approach at Newington is consistent with this and that, although cross connection and ingestion of recycled water occurred, no illness was detected.

In terms of responsibility for such events, Sydney Water advises it considers any cross-connection between recycled water and drinking water to be a drinking water quality incident and Sydney Water will act promptly to restore the integrity of the supply irrespective of who owns or operates the system supplying the other grade of water. Accordingly, when cross connections were identified at Newington, Sydney Water acted quickly to ensure the integrity of the drinking water supply system was restored. In the case of Newington, the Sydney Olympic Park Authority (SOPA) owns the recycled water systems that supply Newington, and Sydney Water provides a range of services to SOPA as documented in a sub-contract agreement with them. These services include activities such as repair and maintenance of the distribution system and plumbing inspections, and following the cross connections Sydney Water carried out plumbing inspections of all dwellings in Newington under the terms of their agreement with SOPA.



5.7 Recommendations

5.7.1 Key Recommendations

Nil

5.7.2 Secondary Recommendations

- R3.1 In reporting water quality results the guideline level should be included in the tables of results to assist the reader to understand whether the guideline level has been exceeded.

6. Infrastructure Performance

6.1 Summary of Findings

- » Sydney Water achieved **Full compliance** with the Water Pressure, Water Continuity and Sewage Overflows on Private Property Standards and Priority Sewerage requirements.
 - » Sydney Water achieved **Full compliance** with the requirement for Reporting on System Performance Standards and the requirements for maintaining records, reporting and access to Service Quality and System Performance Indicators.
 - » Sydney Water achieved **Full compliance** with the calculation and reporting requirements for levels of Water Leakage however there was **No requirement** in this audit period to meet the target leakage rate, due 30 June 2009.
 - » Sydney Water achieved **Moderate compliance** with the requirement for achieving specified Response Time(s) for Water Main Breaks. Criteria which was not achieved included:
 - Priority 6 breaks/leaks requiring 90% of jobs to be attended to within 3 hours (Sydney Water achieved 84%);
 - Priority 5 breaks/leaks requiring 65% of jobs to be attended to within 3 hours (Sydney Water achieved 58%) and also 85% of jobs to be attended to within 6 hours (Sydney Water achieved 80%); and
 - Priority 4 breaks/leaks requiring 100% of jobs to be attended to within 5 days, (Sydney Water obtained 91%; note that this priority is subject to clause 4.13.4).
 - » It is the Auditors' opinion that Sydney Water applied substantial effort towards meeting these Response Time requirements and achieved the best result possible, given the circumstances. Additionally, attempting to meet this Licence requirement resulted in deterioration in performance against the Water Continuity standard. In practice, these Licence conditions appear to be working inversely to one another. Significant improvement in performance in 2006/07 may not be appropriate given it would require Sydney Water to reduce resources being applied to other Licence and Ministerial requirements that are more likely to achieve substantial and permanent reductions in water loss
 - **No Requirement** was assessed, under Clause 4.14.2, as Sydney Water indicated that it has not been impaired to meet the Priority Sewage Program targets, due to delays caused by consent authorities. However, significant delays in the planning process have been identified though, at this stage, 'no delays' to the overall project delivery timetables are noted. A recommendation to confirm achievement of targets and the impact of delays caused by consent authorities has been made.
 - » Sydney Water obtained a **Moderate compliance** with the Ministerial requirement that eighteen flow meters be installed in the water supply system in 2005/06. Sydney Water had installed (but not commissioned) ten flow meters by June 2006. It is noted that Sydney Water also advised it will not achieve the 2006/07 target.
- The auditor benchmarked Sydney Water's performance against the performance of another agency, who recently completed delivery of a directly comparable flow meter upgrade program, it is the auditor's opinion that:

- Sydney Water achieved all that could reasonably be expected; and
- the proposed revised future program, as specified in Sydney Water's advice to the Minister, is realistic and achievable.
- » Sydney Water obtained a **High compliance** with the Ministerial requirement that six water pressure control zones be established in 2005/06. Sydney Water successfully demonstrated that the same number of customers could be incorporated into only four pressure control zones to achieve the same (net) result. Thus, it is the Auditors' opinion that the objective of pressure control has been achieved with a lower numeric number of zones, than those specified.
- » A key factor in Sydney Water achieving compliance with this part of the Licence is the major reorganisation of its field resource management to meet the higher on-going workload resulting from the carry-over of work and new licence requirements, for example:
 - the water continuity standard;
 - the response time requirement, and;
 - the renewal and rehabilitation of network assets and reservoir zones,
 as well as a higher transitory workload to meet the major modification programs, for example:
 - the major shutdowns required for flow meter installation; and
 - the shutdown and reconfiguration requirements for implementing low pressure zones.
- » It is the Auditors' opinion that Sydney Water has made significant improvements in the efficiency and effectiveness of its resource management as a result of this reorganisation.

6.2 Summary of Requirements

Part 4 of the Operating Licence specifies requirements relating to Infrastructure Performance. The key requirements of these clauses are outlined below.

- » Clause 4.4 – Compliance with Performance Standards
- » Clause 4.5 – Reporting on System Performance Standards
- » Clause 4.6 - Review of System Performance Standards
- » Clause 4.7 – Service Quality and System Performance Indicators
- » Clause 4.8 – Asset Management Obligation
- » Clause 4.9 – Reporting on the Asset Management System
- » Clause 4.10 – Auditing the Asset Management System
- » Clause 4.11 – Water Leakage
- » Clause 4.12 – Reports Related to Water Leakage
- » Clause 4.13 – Response Time for Water Main Breaks
- » Clause 4.14 – Priority Sewerage



6.3 Ministerial Requirements

In respect to Ministerial requirements, Sydney Water is required to achieve the forecasts for its flow meter and pressure zone installation programs to June 2007, vis:

- 18 flow meters in 2005/06 and 50 in 2006/07, including 30 renewals; and
- 21 pressure zones created by June 2007.



6.4 Details of Compliance

Table 6-1 Licence Part 4 – Infrastructure Performance

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.	No requirement	Definitional clause, only
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	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be consistent with the definition.
4.1.3	<p>For the purpose of the water pressure standard (including clause 4.7 and the Schedules), the following applies:</p> <p>(a) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property;</p> <p>(b) a Property is taken to have experienced a water pressure failure at each of the following times:</p> <ol style="list-style-type: none"> 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 <p>(c) a Property will not be taken to have experienced a</p>	Full compliance	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be consistent with the definition.



Clause	Requirement	Compliance	Findings
	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	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be consistent with the definition.
4.2 - Water Continuity Standard			
4.2.1	Sydney Water must ensure that: <ul style="list-style-type: none">a) no more than 32,000 properties experience a Planned Water Interruption exceeding 5 hours in a financial year; andb) (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.	No requirement	Definitional clause, only



Clause	Requirement	Compliance	Findings
4.2.2	<p>4.2.2 For the purpose of the water continuity standard, the following applies:</p> <p>(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;</p> <p>(b) each separately billed or separately occupied part of a multiple occupancy Property is a separate Property; and</p> <p>(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.</p>	Full compliance	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be consistent with the definition.
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	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be 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.	No requirement	Definitional clause, only
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	The auditor reviewed Sydney Water's operational interpretation/application of this definition and the data collected. Sydney Water's reporting was found to be 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	<p>4.1.1</p> <p>Sydney Water has reported 2,540 properties as experiencing a water pressure failure in 2005/06. There were 464 properties affected due to capacity issues and 2,076 properties affected due to abnormal operations.</p> <p>This is less than last year where 2,860 properties were affected by water pressure failure.</p> <p>4.2.1</p> <p>(a) A total of 27,805 properties were affected by the 422 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 2004/05, 19,214 properties were affected by unplanned shut downs, this figure is significantly lower than 2005/06.</p> <p>(b) A total of 14,220 properties were affected by the 160 planned shut down events; this is below the limit specified in the standard of 32,000. Sydney Water indicated the number of properties affected by a planned shut down increased due to the expanded water main renewal and leak reduction program. In 2004/05, 8,527 properties were affected by planned shutdowns.</p> <p>Sydney Water attribute the large increase in planned and unplanned water interruptions as a result of:</p> <ul style="list-style-type: none"> » the increasing emphasis on water main renewal and leakage reduction; » the Operating Licence requirement to stop loss of water within specified timeframes; and » the extended dry period from March 2006 to June 2006, <p>The above combined to result in an increase in main breaks during this period.</p> <p>4.3.1</p> <p>Sydney Water reported 22,572 uncontrolled dry weather sewage overflows on private properties during dry weather. This is below the target set in the standard of 25,000 and is higher than last year when 21,462 properties were affected.</p> <p>The number of high-rise multiple occupancy properties affected by sewer overflows has increased, which is mainly a result of redevelopment of established areas with aging infrastructure. The urban consolidation and high-rise development will continue to put</p>



Clause	Requirement	Compliance	Findings
			<p>pressure on sewage overflow figures.</p> <p>Sydney Water advises that some 75% of blockages are caused by sewer chokes resulting from tree roots seeking out moisture and entering pipes (via cracking at the pipe joint or along the pipe). Older pipe materials with mortar joints and rubber rings are more subject to cracking 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 23,400 kilometres of the sewer network. Additionally, tree roots entering private sewers are also penetrating to Sydney Water sewers, and the ability to clean and rehabilitate these private sewers is an ongoing issue. It is estimated that these intrusions account for at least 30% of chokes in Sydney Water sewers. Sydney Water also indicated that it is difficult to remove trees due to council guidelines.</p> <p>Sydney Water had full compliance with the standards of water pressure, water continuity and sewage overflows.</p>
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 had submitted a report on performance to achieve compliance by 1 September 2006 (Sydney Water Operating Licence Compliance Report 1 st July 05 – 30 June 06).
4.5.2	<p>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:</p> <p>(a) a water pressure failure;</p> <p>(b) a Planned Water Interruption or an Unplanned Water Interruption;</p> <p>(c) an Uncontrolled Sewage Overflow.</p>	Full compliance	Evidence was produced that Sydney Water had submitted a report on performance to achieve compliance by 1 September 2006 (Sydney Water Operating Licence Compliance Report 1 st July 05 – 30 June 06).
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	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 to enable reporting against those standards.



Clause	Requirement	Compliance	Findings
	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 provided both physical and electronic access to their records.
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.	No requirement	This clause is outside the scope of audit. IPART initiated this review in 2005/06 and consulted with Sydney Water and other stakeholders. It is noted that Sydney Water made a positive and substantial contribution to the review.
4.6.2	The report under clause 4.6.1 must include an analysis of the benefits and costs of any amendments.	No requirement	Clause outside scope of audit.
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.	No requirement	Clause outside scope of audit.
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 the 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
4.7.2	Where there is any inconsistency between any of those indicators (or their application), the decision of IPART will prevail.	No requirement	Clause outside scope of audit.
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 compliance	By 1 September 2006, Sydney Water reported to IPART its performance against the service quality and system performance indicators in Schedule 1 for 2005/06. The Sydney Water Operating Licence Compliance report, 1 July 2005 to 30 July 2006, included an analysis of 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 its records under clause 4.7.3.
4.8 - Asset Management Obligation			
	<p>Sydney Water must ensure that its Assets are managed consistent with;</p> <p>(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;</p> <p>(b) subject to (a) above, the lowest life cycle cost and acceptable risk of the Assets;</p> <p>(c) the whole of life of the Assets; and</p> <p>(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.</p>	No requirement	IPART specified in its auditing instructions that this Clause was outside the scope of the 2005/06 audit.



Clause	Requirement	Compliance	Findings
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.	No requirement	IPART specified in its auditing instructions that this Clause was outside the scope of the 2005/06 audit.
4.9.2	<p>The report must include the following matters:</p> <ul style="list-style-type: none"> (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 (g) such other matters reasonably required by IPART. 	No requirement	IPART specified in its auditing instructions that this Clause was outside the scope of the 2005/06 audit.
4.10 - Auditing the Asset Management System			
4.10.1	<p>At least once during this Licence IPART may (at a time it determines) conduct an audit of</p> <p>Sydney Water's compliance with clauses 4.8 and 4.9.</p>	No requirement	IPART specified in its auditing instructions that this Clause was outside the scope of the 2005/06 audit.



Clause	Requirement	Compliance	Findings
	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.	No requirement	IPART specified in its audit instructions that this Clause was outside the scope of the 2005/06 audit.
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.	No requirement	IPART specified in its audit instructions that this Clause was outside the scope of the 2005/06 audit.
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.	No requirement	IPART specified in its audit instructions that this Clause was outside the scope of the 2005/06 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.	No requirement	IPART specified in its audit instructions that this Clause was outside the scope of the 2005/06 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.	No requirement	<p>Sydney Water prepared a Standard Operating Procedure <i>for drinking water leakage and response to water main breaks</i>.</p> <p>In 2005/06, leakage was estimated to be 44.9 GL/year or 123 ML/d. This figure is an improvement on 2004/05 performance when 145 ML/d was the estimated leakage.</p> <p>Sydney Water has attributed the decrease 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. Inspection processes include the use of sophisticated acoustic and electronic equipment to scan the water network. This method helps to identify</p>



Clause	Requirement	Compliance	Findings
			hidden leakage and carry out repairs to leaks. The Active Leakage Detection Program is estimated to have achieved a total sustainable reduction of 50ML/d since implementation, with the remainder of the savings attributed to other methods, such as improved response times to leaks and breaks.
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 compliance	Sydney Water utilises IPART approved assumptions and methodology.
4.11.3	On 1 September 2006 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	Full compliance	<p>Sydney Water calculated and provided to IPART its economic level of leakage.</p> <p>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.</p> <p>In order to meet the 2009 target, the 2005/06 'interim' or trend based target for leakage was set at 137.0 ML/d. Sydney Water has improved significantly, to achieve a leakage level of 123.0 ML/d in 2005/6, and therefore is on target to achieve the target compliance of 105ML/d by 2009.</p>
4.12 - Reports Related to Water Leakage			
4.12.1	Sydney Water must report to IPART no later than 1 September 2006 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 2006. Further, Sydney Water, in a letter dated 8 August 2006, reported performance directly to the Minister. See Clause MR 4.1 under Ministerial Requirements in this table for findings with respect to the reported results.



Clause	Requirement	Compliance	Findings
4.12.2	<p>Sydney Water must report to IPART, no later than 1 September 2006, on the number of water pressure control zones in Sydney Water's Drinking water system that Sydney Water:</p> <p>(a) intends to complete in the current and subsequent financial years; and</p> <p>(b) had planned to complete in a financial year compared with the number actually completed in that financial year.</p>	Full compliance	<p>Sydney Water reported to IPART by 1 September 2006. Further, Sydney Water, in a letter dated 8 August 2006, reported performance directly to the Minister. See Clause MR 4.1 under Ministerial Requirements at the end of this table for findings with respect to the reported results.</p>
4.12.3	<p>Sydney Water must report to IPART, no later than 1 September 2006, 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.</p>	Full compliance	<p>Sydney Water reported by 1 September 2006.</p> <p>Sydney Water reported for 2005/06 there were 15,508 breaks and leaks recorded in the drinking water trunk and reticulation system between water treatment plants and properties.</p> <p>Sydney Water assigns priorities to leaks reported by customers, which range from Priority 6 (most urgent) to Priority 1 (least urgent). The weighted average to repair burst, breaks and leaks was 34.25 hours.</p>
4.12.4	<p>Sydney Water must report to IPART, no later than 1 September 2006, on:</p> <p>(a) the number of kilometres of reticulation mains it inspected during the preceding financial year for Water leakage; and</p> <p>(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.</p>	Full compliance	<p>Sydney Water reported to IPART by 1 September 2006.</p> <p>Sydney Water's Active Leakage Detection Program inspected 18,011 kilometres for leakage in 2005/06. This figure complied with its annual target of inspecting 18,000 kilometres of water reticulation mains.</p> <p>Evidence was produced that Sydney Water's Active Leakage Detection Program resulted in the inspection of 104 supply zones for leakage in 2005/06. Zones that exhibited very low levels of leakage during their first inspection are not likely to be re-targeted for some time. Correspondingly, zones with high leakage levels will be targeted more often, with some being scanned more than once per year. Leaks identified within these zones are repaired as part of the Active Leakage Detection and Repair Program.</p>
4.13 - Response time for Water main breaks			
4.13.1	<p>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</p>	Moderate compliance	<p>Overall, Sydney Water obtained a moderate compliance with this standard, as it complied with some but not all criteria. The results for the individual requirements were:</p> <p>a) Priority 6 breaks/leaks: 70% of jobs within 2 hours—Compliance (Sydney Water achieved 72%)</p>



Clause	Requirement	Compliance	Findings
	<p>time Sydney Water receives notification of a break or leak to the time Sydney Water stops the loss of water, shall be as follows:</p> <p>(a) Priority 6 breaks/leaks: 70% of jobs within 2 hours 90% of jobs within 3 hours</p> <p>(b) (b) Priority 5 breaks/leaks: 65% of jobs within 3 hours 85% of jobs within 6 hours</p> <p>(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</p>		<p>90% of jobs within 3 hours—Non Compliance (Sydney Water achieved 84%);</p> <p>b) Priority 5 breaks/leaks: 65% of jobs within 3 hours—Non Compliance (Sydney Water achieved 58%) 85% of jobs within 6 hours—Non Compliance (Sydney Water achieved 80%); and</p> <p>c) Priority 4 breaks/leaks: 50% of jobs by end of next working day—Compliance (Sydney Water achieved 67%) 100% of jobs within 5 days, subject to clause 4.13.4—Non Compliance (Sydney Water achieved 91%).</p> <p>There were two main issues related to the introduction of the new requirement. The first was to implement new resource management arrangements and the second was managing the conflict between meeting response time targets (shutting down the water main as quickly as possible) and the pre-existing water continuity standard (shutting down of the water main before work crews were ready/available to carry out the repair, and therefore increasing the duration of customer outages).</p> <p>It was noted that for several major incidents, Sydney Water personnel had to make value judgements on attempting to meet this Licence requirement by shutting down as quickly as possible or the requirement of the water continuity standard by minimising the duration of outages to customers.</p>
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 2006, 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 a report on performance against the relevant standards by 1 September 2006.
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.	Full compliance	<p>Sydney Water provided its non-compliance list to IPART as part of its Compliance Report.</p> <p>Sydney Water did not respond to 100% of Priority 4 jobs within five days, instead it achieved</p>



Clause	Requirement	Compliance	Findings
	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.		<p>91% for this standard.</p> <p>A table showing reasons for non- compliance in Priority 4 jobs was presented to the auditors, and showed that 73% of non compliance was a result of:</p> <ul style="list-style-type: none"> • difficult leak detection of minor leaks, or • difficulty in gaining access.
4.14 - Priority Sewage			
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;	No requirement	Sydney Water provided updates to the Minister on the progress of the connection to 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	Full compliance	A briefing was provided to the Minister, on 21 June 2006, on how Sydney Water intends to service the area of Menangle/Menangle Park
	(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.	No requirement	Updates were provided to the Minister on the progress on these connections and included those lots that 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.	No requirement	<p>In the 2005/06 Operating Licence Compliance Report, Sydney Water reported that there are '<i>no delays identified at this time</i>'. However it is evident to the auditors that there have been significant delays from consent authorities in the planning process. In one case it has taken approximately 272 days to get approval from a consent authority.</p> <p>Sydney Water have advised that it "anticipates delays" from consent authorities in its project management, and, currently, there are 'no delays' to overall project delivery timetables, and therefore this requirement has not been triggered.</p>



Clause	Requirement	Compliance	Findings
			Concern is expressed, that the flexibility available to deliver Sydney Water's timeframe may have been reduced due to consent authority delays. As such, a recommendation to review and report on the impact of delays, and proposed actions to deliver the targets has been made.
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 compliance	A report was provided to IPART by 1 September 2006, on Sydney Water's 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) .	No requirement	Definitional clause, only. Schedule 5 applies.
Ministerial Requirement			
MR 4.1	Achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007:		



Clause	Requirement	Compliance	Findings
	(a) 18 flow meters in 2005/06 and 50 in 2006/07, including 30 renewals	Moderate compliance	<p>In 2005/06 funding of \$10.4 million was approved for a two-year program to install 68 flow meters in order to enable leakage trend analysis, by minimum night flows, to increase from 30% to 75% of water supply network.</p> <p>The forecast target for 2005/06 was eighteen flow meters to be installed, however Sydney Water had installed (but not commissioned) ten flow meters by June 2006. Therefore Sydney Water has not complied with this requirement.</p> <p>The reasons for the delay and Moderate Compliance for flow meter installation given by Sydney Water include:</p> <ul style="list-style-type: none">» the complexity of works required to allow services to be removed during installation;» faulty and incomplete asset records and assets;» extended delivery time by some suppliers; and» restricted access to trunk mains. <p>Given the significance of this breach, the auditor, as well as validating Sydney Water's reasons for its compliance, benchmarked its performance against a comparable flow meter installation program recently completed by another water agency. This benchmarking identified equivalent experiences and that the timeframe specified for Sydney Water to complete the program was, in the auditor's opinion, challenging.</p> <p>It is noted that Sydney Water advised that 17 of the required 18 flow meters were subsequently commissioned (between end June 2006 and the time of audit) and this has been taken into account in the assigning of a moderate compliance.</p>



Clause	Requirement	Compliance	Findings
	(b) 21 pressure zones created by June 2007.	High compliance	<p>Funding of \$6.3 million was approved in 2005 for Stage 1 of the Program to create 21 pressure management zones in high-pressure areas in Sutherland, Blacktown and Illawarra.</p> <p>Sydney Water's forecast target for 2005/06 was six water pressure control zones, however, during the investigation process it was identified that only four water pressure control zones were required to achieve the objective of the requirement. Therefore, there has only been a numeric Non Compliance with this requirement. Sydney Water noted that progress has been made for another three water pressure zones in 2005/06.</p> <p>Sydney Water noted a critical issue contributing to the High Compliance was the complexity of the system rezonings required. These complexities can lead to significant customer supply disruptions.</p>

6.5 Discussion

6.5.1 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 6-1. 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 6-2 Aspects Covered by the Audit for the System Performance Standards

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| <ol style="list-style-type: none"> 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. 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 are maintained in the future. |
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Interpretation and application of the Amended Standards

Sydney Water's definitions and interpretations of the standard are generally consistent with the Operating Licence. Sydney Water's interpretation and application of the new 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.

In 2005/06, system changes were made to the data collection and reporting systems used by Sydney Water for reporting against the SPSs.

Evidence of training manuals, memo updates of changes and improvements for staff and training attendance were provided. Sydney Water has process maps for both field and office crews. Manuals produced included the '*Field Reporting Guide*' and a manual for field crews, that was very user friendly for crews, as it contained pictures of the types of failures 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 and records of training attendance for relevant staff.

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 2005/06 Operating Licence Compliance Report included comparison of historical performance for SPSs, brief trend analyses and explanations of the reasons for the results. The analyses provides a useful and sufficient context for stakeholders but could be extended in future to include the System Performance Indicators.

ISO 9001:2000 Standard Certification certificates from Benchmark Certification Pty Ltd, (issued August 2006), were provided for reporting activities. Internal process audit information was also provided.

In general, the process of monitoring and reporting is considered to be reasonably reliable based on an 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 2005/06 reporting year.

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

6.5.2 Drinking Water Pressure

Accuracy and Confidence Assessment

Assessing this audit component against the agreed interpretation in the Monitoring and Reporting Protocol, Sydney Water provided evidence of:

- » Investigating, measuring and reporting water pressure SOP;
- » Summary of Outcomes for Water Pressure 2005/06;
- » Water Pressure Folio of Progress;
- » Training Records; and
- » Field Reporting and Maintenance Guides.

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

Strategies, Plans and Programs to Ensure Compliance

Water Pressure gauges are calibrated annually, and Sydney Water maintains a recording management system in order to monitor and measure performance against the Water Pressure Standard.

The upgrade program for pressure recording gauges is almost complete.

Sydney Water predict that there will not be a substantial shift in the number of properties affected by water pressure failures if water restrictions were to cease at some point in the future.

Summary

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

6.5.3 Drinking Water Continuity (unplanned and *'Planned and Warned'*)

Accuracy and Confidence Assessment

Sydney Water provided evidence of:

- » Folio of Progress;
- » Training Records;
- » Audit Reports – Quality Assurance;
- » Field Reporting and Maintenance Guides;
- » Standard Operating Procedure for Continuity and Leak Response;
- » Number of Properties;
- » Team briefings and Memos;
- » Priority Change Results;
- » Electronic Records; and
- » Job Cards.

In previous audit reports, the issue of counting vacant properties in recording of water continuity outages was raised and vacant properties are now excluded from the recorded count.

As also noted in the 2004/05 audit, there were issues with the following matters.

- » Establishing/validating the connectivity of corner blocks and the consequent counting of these blocks in the outage reporting. The current process for inclusion or exclusion of corner blocks from the count is a connectivity assessment made by the GIS operators drawing the polygon for counting of the blocks/properties affected. When an operator is in doubt, corner blocks have been included. There is, therefore, a significant opportunity for overestimation of the affected blocks/properties. It is recommended that Sydney Water explore and report on options for improving this process.
- » Identification and counting of customer outages where a single asset failure resulted in multiple outage events. The Sydney Water WAMS system, used for managing the response and repair activities is focused on the asset failure not the customer outage, or number of outages. Sydney Water could not prove that multiple outages for single asset failures/events were effectively recorded, for reporting purposes. It is recommended that Sydney Water implement a process or practice to reliably identify and account for these outages.

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 to the extent that they overestimate the number of properties affected, but further refinement is required and as such recommendations have been carried forward to be acted upon over the 06/07 audit period.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water's water main renewal and replacement strategy is primarily focused on the failure frequency of water mains. The increase in the number of properties affected by unplanned outages, in excess of 5 hours, is a reflection of the increase in main breaks and the conflict between this standard and the response time requirement. Sydney Water is looking at further improvements in operational processes and practices to minimise these impacts.

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.

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 but there is room for improvement with respect to identification of corner block connectivity and counting of multiple outages for single asset failure events.

It is recommended that Sydney Water investigate options for improving property counts affected by corner block connectivity and multiple outages for single asset failure events.

6.5.4 Sewage Overflows

Accuracy and Confidence Assessment

Sydney Water provided evidence of:

- » Folio of Progress;
- » Training Records;
- » Audit Reports – Quality Assurance;
- » Certification Documents from Benchmark;
- » WAMS sewage failure data;
- » Breakdown of sewage Complaints;
- » Team briefings and Memos;
- » Number of Properties;
- » Electronic Records;
- » Field Reporting and Maintenance Guides;
- » Job Cards; and
- » Certificate of Excellence for IWA Innovation in Operations – Dry Weather Overflow (Sewer Choke) Management Strategy

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.

Strategies, Plans and Programs to Ensure Compliance

The Dry Weather Overflow Strategy (DWOS) found there is a correlation between prolonged dry weather events and high numbers of sewage overflows. Sydney Water has allocated \$20M/year over the next three years for targeting overflows to waterways and repeat overflows to customer 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. In 2006/07, field work will commence to investigate assets that service this type of property. In addition, Sydney Water has continued to implement a process that analyses system performance data and initiates investigations to reduce the probability of a sewer overflow occurring in high rise occupancy properties. The investigation process identifies a proactive cleaning program for potential high service availability charge (>\$10,000 p.a) residential, commercial and industrial customers.

Sydney Water noted that the choke management strategy is hard to implement due to the technical characteristics of the issues being targeted. Sydney Water believes approximately 70% of chokes occur in mains that have not had a previous failure, which necessitates shifting from a historical to a more proactive approach. In 2005/06 there was a transition from the scheduled cleaning program to a more proactive inspection program using CCTV cameras that aid in assessment of the rehabilitation needs of the system.

Summary

Sydney Water fully complies with the standard for no more than 25,000 Properties (other than Public Properties) that experience an Uncontrolled Sewage Overflow in dry weather in a financial year. Sydney Water reported 22,572 uncontrolled sewage overflows on private properties were affected by dry weather. This is below the standard of 25,000. The sewage overflow numbers are higher than last year, when 21,462 properties were affected by uncontrolled sewage overflows.

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

6.5.5 Water Leakage

Accuracy and Confidence Assessment

Sydney Water provided process maps for the assumptions, calculations and outputs of water leakage calculations. Sydney Water use the Global Water Balance Method to estimate the leakage from the water distribution system. The water balance is a reconciliation of the volume of water produced by Sydney Water's water filtration plants with all known and estimated end uses subtracted, with the remainder deemed to be leakage.

Sydney Water noted the method of estimation of under-registration customer registration has changed this year, compared with the last two years. Previously default values were used as agreed with Water Services Association of Australia (WSAA). This year new data was made available for more reliable estimates for the smaller meter sizes that measure about 75% of all consumption. The new method results in a reduction in the customer meter under-registration, and there is an equivalent increase in water loss volume therefore the downward trend of leakage may be slightly stronger than indicated by this years result.

Sydney Water follows the methods, definitions and terminology recommended by the International Water Association and WSAA.

There is an inherent uncertainty in the methodology that is believed to be in the vicinity of +/-25% of the reported value.

Strategies, Plans and Programs to Ensure Compliance

The leakage reduction strategies implemented by Sydney Water have proved effective and these strategies will be continued into the future. Table 6-3 shows Sydney Water is on track to achieve the 2009 target.

Table 6-3 Progress Towards Meeting 2009 Leakage Target

Leakage Level (ML/D)	2005/06	2006/07	2007/08	2008/09
Timetable	137.0	128.0	118.0	105.0
Actual Results	123.0	-	-	-

Summary

The 2005/06 target for leakage level for Sydney Water was 137.0 ML/d. Sydney Water has improved significantly, to achieve a leakage level of 123.0 ML/d in 2005/6, and therefore is on schedule to achieve the target compliance of 105ML/d by 2009. Sydney Water will continue to use strategies to improve water leakage reduction and process to increase confidence in the economic level of water leakage figures.

Sydney Water reports that gains in leakage control should become more apparent in 2006/07 as the full benefits of the management programs will be realised.

6.5.6 Water Main Breaks, Bursts and Leaks and Repair Time

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.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water has suitable processes and practices in place and a quality assurance system for ensuring future compliance.

Summary

Sydney Water obtained full compliance with this requirement. Sydney Water has recorded 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.

6.5.7 Water Main Inspection and Rehabilitation Zones

Accuracy and Confidence Assessment

Sydney Water provided documentation of processes and practices for collecting and reporting water main inspection, reservoir zone leakage investigations and the rehabilitation of reservoir zones.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water has suitable processes and practices in place and a quality assurance system for ensuring future compliance.

Summary

Sydney Water obtained full compliance for this requirement. Sydney Water has suitable processes and practices in place to ensure reporting of water mains inspected, reservoir zone leakage investigations and the rehabilitation of reservoir zones

6.5.8 Response Times to Water Main Breaks

Accuracy and Confidence Assessment

The auditor was provided with evidence of training, manuals, quality assurance audits and team briefings (including briefings of relevant changes associated with the Licence requirements).

Strategies, Plans and Programs to Ensure Compliance

Evidence was produced of a significant development effort in order to meet the requirements specified for response times to water main breaks, and this included:

- » the introduction of shift arrangements;
- » increased utilisation of contracted staff to manage peak workloads;
- » the introduction of single worker first call response;
- » improved procedures for assigning leakage priority; and

- » improved arrangements for scheduling and dispatch of work crews.

Performance against response times was good until the dry weather led to an escalation in breaks/leaks in April, May and June 2006 with 1105, 1548 and 1129 respectively, compared to the usual 500-800 breaks/leaks per month. Additional measures adopted to combat this rise in the number of breaks and leaks included:

- » reallocation of maintenance crews from non-essential maintenance to worst affected areas;
- » an increase in the use of more efficient tools and equipment; and
- » an increased use of contractors to carry out routine maintenance in order to free up experienced internal maintenance resources.

Sydney Water also advised that approximately 10% of jobs had their priority rating upgraded by staff arriving on site, from the priority originally assigned. Due to the first response being based on the original priority, these priority upgrades resulted in an automatic breach against the requirements of the revised priority. This issue resulted in poorer performance being reported by Sydney Water.

It is noted that Sydney Water experienced some minor industrial action during the implementation of the above strategies and has had to introduce a fatigue management policy to assist in managing the additional pressure on staff in meeting the new Licence requirements.

Future actions noted by Sydney Water include further optimisation of existing workforce utilisation, additional training, further changes to work practices to focus on the required remedial action in a timely manner and additional use of contractors when and where appropriate.

Summary

Overall, Sydney Water obtained a Moderate Compliance with this standard, as there was compliance for some criteria and non-compliance for other criteria.

In the cases whereby jobs are increased in priority, the auditor recommends that Sydney Water be allowed to 'restart the clock'. This will remove the problem of automatic failure simply as a result of an increase to the job priority. Sydney Water will then have appropriate time to respond.

6.5.9 Priority Sewerage

Accuracy and Confidence Assessment

Sydney Water provided evidence of briefings and letters to the Minister, timelines and current progress of the various areas under the Priority Sewage Program. Sydney Water also demonstrated progress to date aligned with that reported in the briefings and letters.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water has defined project management timelines and performance reporting regime to monitor progress.

Summary

Although Sydney may be 'in progress' on completion of the Priority Sewage Program, it obtained a 'No requirement' to write to the Minister for Energy and Utilities, to advise the Minister of delays from consent authorities. Despite planning delays being evident, Sydney Water advised that, no current delays to the overall project delivery have occurred and thus the requirement to write to the Minister has not been triggered.

It is recommended that Sydney Water review and report to IPART on the impact of delays from consent authorities and the action it has and proposes to take, in meeting the required targets.

6.5.10 Ministerial Requirement for Bulk Water Meters Planned and Installed

Accuracy and Confidence Assessment

Sydney Water reporting is adequate for this standard. Additionally, Sydney Water wrote to the Minister on 8 August 2006 to report on Non Compliance with this requirement.

Strategies, Plans and Programs to Ensure Compliance

Sydney Water reported intended improvements in program delivery efficiency and effectiveness, with:

- » use of newly developed standardised designs on future sites; and
- » testing of innovative installation techniques including installing flow meters by divers.

These improvements are predicted to save time and money, with no excavation required and much less disruption to supply.

Summary

The forecast target for Sydney Water for 2005/06 was eighteen flow meters to be installed, however Sydney Water had installed (but not commissioned) ten flow meters by June 2006. Therefore Sydney Water has been assigned a moderate compliance for this requirement.

It will be challenging for Sydney Water to meet its 2006/07 target, but the project is expected to be completed by the end of September 2008. It is anticipated that a total of 40 flow meters will be commissioned by end 2006/07.

Having benchmarked Sydney Water against another water agency, which has recently completed a directly comparable flow meter installation program, the auditor believes that the program as originally planned was ambitious.

6.5.11 Ministerial Requirement for Water Pressure Control Zones: Planned and Completed

Accuracy and Confidence Assessment

Sydney Water's reporting is adequate for this standard. Additionally, Sydney Water wrote to the Minister on 8 August 2006 to report on non-compliance with this requirement.

Strategies, Plans and Programs to Ensure Compliance

The Ministerial Requirement was for Sydney Water to achieve the forecasts for the Pressure zone installation program, to June 2007. The forecast for June 2006 was the installation of six (6) pressure zones.

Zones are selected using multiple criteria, such as: the history of main breaks, the number of properties, length of mains and desktop analysis of leakage. Zones and pressure areas are ranked, by priority, for action. Where possible, Sydney Water then tries to reduce the pressure, however, there are limitations due to the impact on customers at higher elevations within the target zones and complications due to complex system configurations.

The auditor noted that the detailed assessment and design process allowed Sydney Water to optimise zone configurations and achieve the intent of the requirement.

Financial efficiencies can be gained by servicing the same number of designated properties within a lesser number of pressure zones than originally envisaged. Thus while the number of properties and the water savings under the new pressure regulation arrangements will be the same, fewer zones will be created.

Sydney Water advised that lessons learnt in the 2005/06 program are being applied to improve the 2006/07 program delivery efficiency and effectiveness, however, rezoning of crucial systems must be carefully planned and executed on a case by case basis due to each system's unique characteristics.

Summary

Sydney Water was assigned high compliance for the water pressure control zone targets in 2005/06. Sydney Water expects that fewer zones than the originally forecast, which specified 21, will be completed by the end of 2006/07. Six zones were forecast by June 2006. Whilst a numerical non-compliance (4 compared to 6 pressure control zones) was evident, the same numbers of households, as originally envisaged, have come under the new pressure regulation arrangement.

6.5.12 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 2005/06. Table 6-4 shows the available data for 2001/02-2005/06. Where comparable data is unavailable (for previous years) the cells have been greyed out. The table will be built upon in future audits so that trends can be analysed.

Table 6-4 Comparison of System Performance Indicators

Indicators	Indicator Parameters	2001/02	2002/03	2003/04	2004/05	2005/06
Water Continuity						
2-1. Water Continuity – Planned Number of properties affected by shut-offs in a report year that are:	<1 hour					2,952
	>1 hour but ≤ 5 hours	73,188	76,264	81,919	67,481	79,210
	>5 hours but ≤ 12 hours	18,816	20,132	15,968	8,527	14,038
	>12 hours but ≤ 24 hours	526	98	96	0	182
	>24 hours	0	0	0	0	0
	Total					96,382
2-2. Water Continuity – Unplanned Number of properties affected by shut-offs in a report year that are:	<1 hour					150,675
	>1 hour but ≤ 5 hours	163,338	253,332	201,125	198,915	265,639
	>5 hours but ≤ 12 hours	14,658	18,976	15,983	18,292	26,306
	>12 hours but ≤ 24 hours	1,010	604	362	751	1,336
	>24 hours	102	0	0	171	163
	Total					444,119
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



Indicators	Indicator Parameters	2001/02	2002/03	2003/04	2004/05	2005/06
	(b) Average time of a water interruption (min)					146
	(c) Average time period customers experienced water interruptions (min)					46
4-1. Number of properties which experienced unplanned	2 interruptions					58,115
	3 interruptions					14,989
	4 interruptions					4,393
	5 or more interruptions					2,005
	Total					79,502
4-2. Number of properties which experienced planned	2 interruptions					9,443
	3 interruptions					1,443
	4 interruptions					173
	5 or more interruptions					0
	Total					11,059
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

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					44,906
7. Response time to breaks						663
7-1. Average time taken to respond to breaks, bursts and leaks resulting in mains being shut down (min).						
7. Response time to breaks	Priority 6 – % of jobs within 2 hours					72
7-2. Rate of compliance with response times for different leak categories						
	Priority 6 - % of jobs within 3 hours					84
	Priority 5 – % of jobs within 3 hours					58
	Priority 5 – % of jobs within 6 hours					80
	Priority 4 – % of jobs by end of next working day					67
	Priority 4 – % of jobs within 5 days, subject to clause 4.13.4					91

Indicators	Indicator Parameters	2001/02	2002/03	2003/04	2004/05	2005/06
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
	(b) Permanent low pressure					21
8. Low water pressure 8-2. Number of customer complaints relating to low water pressure	Where SWC does not confirm the low water pressure failure or SWC's systems do not identify that the Property has experienced low water pressure below the minimum pressure standard					34
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
Sewage Overflows						
10. Frequency of uncontrolled sewage overflows and properties affected	10-1. Number of Uncontrolled sewage overflows in Dry weather affecting private properties					12,746
	10-2. Number of Uncontrolled sewage overflows in Dry weather affecting public properties					7,718
	10-3. Number of Uncontrolled sewage overflows in Wet weather affecting private properties					26
	10-4. Number of Uncontrolled sewage overflows in Wet weather affecting public properties					50
	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
11. Repeat sewage	(a) 2 occasions					1,566

Indicators	Indicator Parameters	2001/02	2002/03	2003/04	2004/05	2005/06
overflows 11-1. Number of properties (other than Public properties) which experienced more than one Uncontrolled Sewage Overflow in Dry weather	(b) 3 or more occasions					232
Indicator 11 - Repeat sewage overflows	(a) 2 occasions					0
11-2. Number of properties (other than Public properties) which experienced more than one Uncontrolled Sewage Overflow in Wet weather	(b) 3 or more occasions					1
11. Repeat sewage overflows	(a) 2 occasions					289
11-3. Number of public properties which experienced more than one Uncontrolled Sewage Overflow in Dry weather	(b) 3 or more occasions					25
11. Repeat sewage overflows	(a) 2 occasions					5
11-4. Number of public properties experiencing more than one Uncontrolled Sewage Overflow in Wet weather	(b) 3 or more occasions					1
12. Response times	(a) ≤ 1 hours	3,729*	4,040*	3,015*	2,681*	1,100
12-1. Number of Priority 1 sewage overflows to which response time is	(b) >1 hour	1,109*	1,740*	1,365*	1,500*	1,362
12. Response times	(a) ≤ 3 hours	20,908**	23,910**	19,206**	20,500**	16,292
12-2. Number of Priority 2 sewage overflows to which response time is	(b) >3 hour	2,035**	5,067**	4,163**	6,357**	11,298
13-1. Restoration time	Average time taken by SWC to restore full normal sewerage service from the commencement of Uncontrolled sewage overflows that occurred in Dry weather (min)					401
14. Frequency of breaks and blockages	14-1. No of sewer main breaks and blockages per 1000 properties					12.17
	14-2. Percentage of sewer main breaks and blockages caused by tree roots					75
	14-3. No of property connection sewer breaks and blockages per 1000 properties					0.14
	14-4. Percentage of property connection sewer breaks and blockages caused by tree roots					53

Indicators	Indicator Parameters	2001/02	2002/03	2003/04	2004/05	2005/06
<i>*Old priority 6 (new classification: priority 1)</i>						
<i>** Old priority 5 (new classification: priority 2)</i>						

Discussion

- » There has been a significant increase in the duration of unplanned interruptions to water supply. This is attributable to an increase in the number of events, but more significantly to the introduction of the response time requirement, which is resulting in customer's services being shutdown for longer periods.
- » For sewage overflow response times (subject to the comparability of the data reported under old Priority classifications with data reported under the new classifications), there has been a significant drop in Priority 1 events responded to in less than 1 hour and in Priority 2 events responded to in less than 3 hours.

6.6 Factors Affecting Compliance

External factors considered to have affected compliance during the year, included:

- » the ongoing drought conditions and hot weather which continued to contribute to a higher than average number of properties affected by dry weather sewage overflows and water continuity events;
- » urban consolidation and high-rise development will continue to put pressure on sewage overflow figures; and
- » the time taken by consent authorities to respond to applications is a potential cause for concern for Sydney Water in meeting its priority sewerage obligations.

6.7 Key Recommendations

It is recommended that Sydney Water:

- R4.1 Implement the revised flowmeter installation program, as advised to the Minister in Sydney Water's letter of 8 August 2006.
- R4.2 Implement a reporting process/protocol for delays from consent authorities.

6.7.1 Secondary Recommendations

It is recommended that Sydney Water:

- R4.3 Report to IPART by 30 June 2007 on options for improving methods of assessing and validating connectivity of customer properties in order to improve the accuracy of its counting of properties affected by water continuity events;
- R4.4 Modifies its reporting processes and practices to clearly identify and count individual customer service outage periods where multiple outage events are caused by single asset failure events;
- R4.5 'Restart the clock' for calculating response and repair times for compliance reporting purposes where the priority of a break, leak or blockage is upgraded; and
- R4.6 Review and advise IPART, by 30th June 2007, on the original project delivery plan and

timetable for the "Priority Sewerage Program", including:

- the impact of any delays experienced, to date or anticipated, by consent authorities in the planning process; and
- the actions SWC has undertaken, or proposes to undertake, to meet the Program's requirements (as set out in clause 4.14.1).

7. Customer and Consumer Rights

7.1 Summary of Findings

► Customer Contract

The majority of the Customer Contract clauses in the Operating Licence concern procedural requirements for the amendment of the Contract or for the dissemination of information. Performance in relation to all of the relevant clauses was rated as '**High**' or '**Full compliance**'.

The existing Customer Contract, which had operated for a number of years, was annexed, unaltered, to the new Licence and thus many of the procedural clauses had **No requirement**, as a result.

Detailed analysis of Sydney Water's compliance with the Customer Contract is set out in Appendix F of this Report.

► Consumers

Sydney Water is required to deal with all complaints under the Customer Contract as if the complainants are consumers. **Full compliance** was achieved in this regard.

► Debt and Disconnection

Sydney Water achieved **Full compliance** with all the requirements relating to the Code of Practice, Procedure on Debt and Disconnection, and the dissemination of information regarding the Code.

► Customer Councils

Sydney Water operates one Customer Council, the Corporate Customer Council, and is required to consult regularly with, and obtain high quality advice from, this Council. Consistent with 2004/05 audit report recommendations, Sydney Water has made real efforts to more actively involve the Council and **Full compliance** was achieved.

Sydney Water also achieved **Full compliance** with the majority of the clauses regarding the membership and operations of the Council and terms of the Council Charter. The issue of dual representative roles of Council members had been addressed, late in the audit period, which resulted in a **High compliance** rating. The annual report was yet to be finalised resulting in a **High compliance** rating for the clause dealing with the requirement to report.

► Customer Service Indicators

Sydney Water provided detailed evidence of the establishment, maintenance and implementation of systems to enable accurate measurement of its performance against a set of indicators set out in Schedule 2 of the Licence. A **High compliance** rating was given, acknowledging the quality of the computer and management systems introduced, but also acknowledging the importance of continual improvement, especially in the area of integrated training systems and systematic checks to ensure the effectiveness of the training given to all staff.

Sydney Water achieved **Full compliance** with the reporting requirements set out in this clause.

7.2 Summary of Requirements

Part 5 of the Operating Licence specifies requirements relating to Customer and Consumer Rights. The key requirements of these clauses are outlined below:

Clause 5.1 - Customer Contract: Specifies the scope of and the processes for review and communication of the Contract to customers;

Clause 5.2 - Consumers: The need to deal with all complaints under the Customer Contract as if the complainants are consumers;

Clause 5.3 - Code of Practice and Procedure on Debt and Disconnection: The need to have a code, which includes a number of specific features, and the Code is to be included in the Customer Contract and information disseminated in specific ways;

Clause 5.4 - Customer Councils: That one or more Customer Councils be established, consulted and operated under a specific set of protocols as defined in the Licence; and

Clause 5.5 - Customer Service Indicators: 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 and to report its performance against those indicators annually to IPART.



7.3 Details of Compliance

Table 7-1 Licence Part 5 - Customer and Consumer Rights

Clause	Requirement	Compliance	Findings
5.1	Customer Contract		
5.1.1	<p>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.</p> <p><i>[Note: Division 7 of Part 6 of the Act contains various provisions in relation to the Customer Contract.</i></p> <p><i>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.]</i></p>	No requirement	<p>Ministerial approval was granted for an alteration to the Customer Contract to allow pro rata billing for water and sewerage services commencing 1 July 2006. Given that the alteration is to take effect in the next audit period, commencing 1 July 2006, compliance with publication and notification requirements will not be discussed in this report.</p> <p>The advertising relates to a change to take effect in the next audit period and should not be audited, as it does not relate to a requirement for this period.</p>
5.1.2	<p>Subject to section 56 of the Act, the Customer Contract automatically applies to persons specified in section 55(1) of the Act.</p> <p><i>[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].</i></p>	Full compliance	Clause 2.2 of the Customer Contract indicates that the Contract applies to such persons.
5.1.3	<p>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.</p>	Full compliance	The Customer Contract sets out the rights and obligations of both the Customer and Sydney Water in relation to the services provided, through the systems required under the Operating Licence.



Clause	Requirement	Compliance	Findings
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 compliance	Printed copies of the Customer Contract were available on request, free of charge, from Sydney Water's offices and also available for downloading, free of charge, under 'Publications' on the Sydney Water website.
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:	No requirement	The Operating Licence came into effect on 1 July 2005. Accordingly, the review of the Customer Contract must take place during the five year term of the Licence. The Customer Contract, which forms Schedule 6 to the Operating Licence, is the same contract which applied at the time of the expiry of the former Licence.
5.1.5 (a)	Include an evaluation of the effectiveness of the financial hardship and other Customer protection provisions; and	No requirement	No review required in audit period.
5.1.5 (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.	No requirement	No review required in audit period.
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.	No requirement	No review required in audit period.
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.	No requirement	No review required in audit period.
5.1.8	Sydney Water must prepare a pamphlet that:	High compliance	<p>Sydney Water prepares a number of pamphlets to meet its Licence obligations. During the audit period the pamphlets, which were provided to customers, included 'Water Wrap' and 'Making it Crystal Clear'. The <i>Water Wrap</i> pamphlet is published each quarter with different types of information contained within it, including, in the Winter 2006 pamphlet, information on financial hardship. 'Making it Crystal Clear' is an outline of the Sydney Water Customer Contract and was distributed in the July quarter 2005.</p> <p>Accordingly, the information required is set out in a number of pamphlets, which complies with the intent of the terms of the Operating Licence.</p>



Clause	Requirement	Compliance	Findings
5.1.8 (a)	Provides a brief explanatory introduction to the Customer Contract;	Full compliance	' <i>Making it Crystal Clear</i> ', distributed with quarterly bills in the period July to September 2005.
5.1.8 (b)	Summarises the key rights and obligations of Customers, under the Customer Contract	Full compliance	As above
5.1.8 (c)	Refers to the types of account relief available for Customers experiencing financial hardship	Full compliance	' <i>Water Wrap</i> ' Winter 2006 distributed with quarterly bills in the period April to June 2006.
5.1.8 (d)	Contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operations.	High compliance	' <i>Making it Crystal Clear</i> ' contains Sydney Water's Sydney office and emergency contact numbers in its area of operations. It does not contain details of other local offices 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:	No requirement	While the pamphlets were not required to reflect any changes to the Customer Contract in the audit period, as no such changes were made, the pamphlets were mailed, as indicated below.
5.1.9 (a)	Customers, at least once annually with their quarterly or other bills	Full compliance	Refer to 5.1.8. above.
5.1.9 (b)	Any other person on request	Full compliance	All Sydney Water pamphlets are available at Sydney Water's offices on request and the ' <i>Water Wrap</i> ' pamphlets are available on Sydney Water's website.
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 compliance	Sydney Water entered into other contracts or arrangements for the supply of services in the audit period. These contracts related to trade waste and water re-use or recycling and took the form of written agreements reflecting terms as agreed between Sydney Water and the relevant person or persons.
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 compliance	The complaint handling and complaint resolution systems and procedures employed by Sydney Water do not discriminate between Customers and Consumers. There are no screening questions in this regard when a complaint is made by telephone and the same procedures are employed for resolution of complaints made in writing or online, regardless of whether the complainant is a Customer or Consumer. This is evidenced by documents



Clause	Requirement	Compliance	Findings
			outlining complaint handling protocols and procedures sighted by the auditor, a screen dump of Water Asset Management System (WAMS). The latter has a field for the entry of Customer type and the Code of Practice and Procedure on Debt Recovery and Disconnection of Water Supply which refers to the rights of tenants.
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 compliance	Sydney Water has had a ' <i>Code of Practice and Procedure on Debt Recovery and disconnection of Water Supply</i> ' in place since October 2000. The Code was last revised at 1 November 2005.
5.3.2	The code of practice and procedure on debt and disconnection must provide for:		
5.3.2 (a)	Deferred payment or payment by instalment options for consumption bills.	Full compliance	These options were referred to in the Code. They were also outlined in the ' <i>Water Wrap</i> ' winter newsletter distributed with quarterly bills during the period April to June 2006 as well as being outlined in Section 5 of the Customer Contract.
5.3.2 (b)	The payment options referred to in (a) to be advised in consumption bills.	Full compliance	A sample of bills was provided and it was confirmed that the options referred to in (a) above were advised in consumption bills and reminder notices.
5.3.3	Sydney Water must include the code of practice and procedure on debt and disconnection in its Customer Contract.	Full compliance	Section 5 of the Customer Contract outlines the Code as it relates to customers experiencing payment difficulty while Section 6 contains the provisions regarding disconnection or restriction of water and sewerage services.
5.3.4	Sydney Water must disseminate information on its code of practice and procedure on debt and disconnection free of charge to:		
5.3.4 (a)	Customers, at least once annually with their quarterly or other bills.	Full compliance	The relevant information was contained in the ' <i>Water Wrap</i> ' pamphlet for winter 2006 and distributed free of charge with consumption bills during April to June 2006.
5.3.4 (b)	Any other person on request.	Full compliance	The pamphlet referred to in (a) above was available free of charge at Sydney Water offices on request and online. The Customer Contract, which contains the provisions of the Code, was also available on the website.



Clause	Requirement	Compliance	Findings
5.4	Customer Councils		
5.4.1	<p>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.</p> <p><i>[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].</i></p>	Full compliance	<p>Sydney Water operated one customer council known as the Corporate Customer Council. The Council provided advice and received information on a number of issues including the Customer Service Strategy, customer research, the Metropolitan Water Plan, desalination, the Draft Environment Plan 2006-2011, North Head Sewage Treatment Plant, Sewer choke strategy, recycling, pricing and the Sydney Water Annual Report.</p> <p>The agendas and minutes for the three Council meetings, that took place during the audit period, evidenced discussion and consultation on these issues. Council members were also able to attend various workshops and briefings conducted by Sydney Water and so extend their involvement. Briefing papers for the discussion topics outlined above were sighted and indicated a high level of information provision by Sydney Water to the Corporate Customer Council.</p> <p>David Evans, the then Sydney Water General Manager, met with the Corporate Customer Council in the meeting held on 15 November 2005 to answer questions and provide information.</p>
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 compliance	See 5.4.1. above. Out of session contact was also made with Council members to seek their more detailed comments in relation to the Draft Environment Plan 2006-2011 and the Sydney Water Annual Report. A copy of an email thanking members for their comments on the Draft Environment Plan was provided.
5.4.3	<p>Sydney Water must appoint the members of a customer council, consistent with this Licence.</p> <p>Not Full compliance due to 5.4.4 as stated.</p>	High compliance	Clause 5.4.11 of the Operating Licence specifies that if the majority of members on the relevant Customer Councils are not individuals then the clauses relating to term of office (5.4.8) and the number of terms (5.4.9 and 5.4.12) do not apply. Sydney Water complied with all other requirements (subject to the comments regarding 5.4.4. below) with respect to the appointment of members. Letters of appointment and the changes to membership, which occurred during the audit period, were provided.
5.4.4	<p>At all times, the membership of one or more customer councils must between them include a representative from at least each of the following</p> <p>Clear explanation provided</p>	High compliance	Sydney Water forwarded a letter to all of the members of the Corporate Customer Council in June 2006 clarifying the representative role of each of its members at that date. The letter confirmed that there was a representative of each of the required interests (referred to at (a) to (g) below) on the Corporate Customer Council at that time. The letter referred to the membership of a renewed Corporate Customer Council which commenced in early 2005.



Clause	Requirement	Compliance	Findings
			While there had been some changes to the identity of the individuals from the corporations and organisations on the Corporate Customer Council since early 2005 (for example, changes to the BlueScope Steel and the Property Council of Australia representatives) there had been no change to the corporate constituency. However the letter confirming the representative role of each of the members was forwarded at the end of the audit period and there is no evidence that members were aware of dual representative roles prior to this time.
5.4.4 (a)	Business and consumer groups.		
5.4.4 (b)	Low income households.		
5.4.4 (c)	People living in rural and urban fringe areas.		
5.4.4 (d)	Residential consumers.		
5.4.4 (e)	Environmental groups.		
5.4.4 (f)	Local government.		
5.4.4 (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.	No requirement	There was only one customer council during the audit period.
5.4.6	The customer council or customer councils under this Licence must comprise:		
5.4.6 (a)	Members of any customer council prior to the Commencement Date ("existing members").	Full compliance	The membership of the Corporate Customer Council was restructured in early 2005 with the first meeting of the new Council held on 29 March 2005. Letters outlining the membership of the restructured Council were provided together with details of changes to individuals representing member organisations during the audit period as referred to at 5.4.4. above. Aside from these changes to individual representatives, the existing membership, prior to the Commencement Date, remained.
5.4.6 (b)	Any other person appointed by Sydney Water, consistent with clause 5.4.4.	No requirement	See 5.4.6.(a) above.



Clause	Requirement	Compliance	Findings
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.	No requirement	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.
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	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.
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	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.
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 compliance	Refer to 5.4.4 and 5.4.6 (a) above. Membership remained constant during the audit period though representatives of members changed during the audit period, as described above.
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.	No requirement	As noted, all of the members of the Corporate Customer Council are not represented as individuals but represent corporations and 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:	No requirement	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.
5.4.12 (a)	Existing members will be regarded as having served their first term at the end of the period, mentioned in clause 5.4.7.	No requirement	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.
5.4.12 (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	The provisions of Clause 5.4.11 of the Operating Licence provide that this clause does not apply to the Corporate Customer Council.



Clause	Requirement	Compliance	Findings
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:	No requirement	The Corporate Customer Council was established prior to the audit period and while the existing Charter was adopted for the purposes of the new Operating Licence there were no substantive changes to the Charter during the audit period. The Charter was last amended in April 2005 and covers the issues specified in the Operating Licence.
5.4.13 (a)	The role of the customer council.	Full compliance	See 5.4.13.
5.4.13 (b)	Selection criteria on how members will be drawn from the community.	Full compliance	See 5.4.13.
5.4.13 (c)	Information on how the customer council will operate.	Full compliance	See 5.4.13.
5.4.13 (d)	Induction processes for new members.	High compliance	See 5.4.13 above, although it is noted that there is no description of the induction processes that are to be employed – it is simply stated that appropriate induction for new members is to be provided.
5.4.13 (e)	A description of the type of matters that will be referred to the customer council.	Full compliance	See above – the description takes the form of outlining the general categories of matters that will be referred to the Corporate Customer Council and describing the role of the Council.
5.4.13 (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.	Full compliance	See 5.4.13.
5.4.13 (g)	Communicating the outcome of the customer council's work to Sydney Water.	Full compliance	See 5.4.13.
5.4.13 (h)	Procedures for tracking issues raised and ensuring appropriate follow-up of those issues.	Full compliance	See 5.4.13.
5.4.13 (i)	Funding and resourcing of the customer council by Sydney Water including sitting fees and expenses for members.	Full compliance	See 5.4.13.
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 compliance	There is only one customer council and, as described above, it has a Charter.



Clause	Requirement	Compliance	Findings
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 compliance	Sydney Water provided business papers of the Corporate Customer Council . These papers illustrated the detailed information which had been provided to members of the Council in order to brief them on issues under consideration. Sydney Water also provided evidence that Council members had been invited to several out of session workshops for the purpose of providing them with more information about the relevant issues such as the Customer Service Strategy and Improvement Plan. All 10 members of the Council were contacted and asked whether, from their observation, Sydney Water had provided sufficient information to satisfy the intent of this clause. Four members responded to the survey and indicated that they thought that the necessary information was being supplied with most indicating <u>that they did not know whether all information relevant to the issues had been supplied.</u>
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 compliance	The annual report for the Customer Council is currently being prepared and evidence was produced to establish that it is proposed to be endorsed at the December meeting of the Corporate Customer Council. The Charter is posted on Sydney Water's website.
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 compliance	<p>Schedule 2 of the Operating Licence sets out 19 Customer Service Indicators that are to be measured each year.</p> <p>Customer Service Indicators 1 to 9 related to complaints while the remainder relate to other customer contact and billing and payment issues. Many of the Indicators are to be reported 'per 1,000 Properties'. The total number of properties used for this purpose was the total number of properties with water or sewer connected at 30 June 2006.</p> <p>Sydney Water provided detailed information regarding the automated, computer guided customer contact and complaint handling and recording system which relies on the collation of information from three Sydney Water customer and community relations databases. These databases are referred to as 'Customer View', ACCESS (the billing system) and WAMS (the asset management system). The system operates in accordance with the Measurement and Reporting Protocol agreed between Sydney Water and IPART, which contains the applicable interpretation of the term 'complaint'. The base definition of the term 'complaint' is set out in the Australian Standard AS4269-1995. The aggregation of the data from the three systems to allow compilation of material measuring performance against the Customer Service Indicators is described in a detailed manual, which was sighted by the auditor, along with other material describing the operation of the management system. Material was provided to</p>



Clause	Requirement	Compliance	Findings
			<p>establish that the data was subject to detailed cross-checks prior to finalisation.</p> <p>Sydney Water provided copies of the current Australian Standard 'Customer Satisfaction – Guidelines for Complaints handling in organisations (ISO 10002:2004, MOD) together with the Customer Complaint Procedure document which contains the revised definition of complaint as at July 2005 (contained in the prior Australian Standard referred to above). Printouts of the output of the reporting system as at June 2006 and a screen dump from WAMS were also provided, as were the Customer Contact Centre Training Program and the Service Training Manual.</p> <p>Sydney Water also provided evidence that identified staff were trained in service and customer contact. This evidence did not, however, establish that all existing staff were appropriately trained with respect to all of the calls that they were required to take, and that they were conversant with the three data bases and, where relevant, service protocols. There were two different numbers, one for service difficulties and faults (which would be WAMS issues and another for general enquiries (which may be Customer View or ACCESS) so that, generally, staff trained in the appropriate system would take the calls. However there would be some cases where there may not be such a neatness of fit and a possibility of staff entering information into systems in which they were not fully trained.</p> <p>There was an audit of the level of competence of the staff at the Liverpool Contact Centre on 19 June 2006 but this was relatively limited in its scope. Given that the success of the management system is ultimately dependant upon the competence of the staff dealing with customers. It is recommended that more thorough audits of the competency of all relevant staff be conducted and a program of continuous improvement systematically implemented.</p>
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 compliance	A report ' <i>Operating Licence, Compliance Report 1 July 2005 to 30 June 2006</i> ' was forwarded to IPART prior to 1 September 2006. The Report outlines Sydney Water's performance against the Customer Service Indicators for the preceding financial year.
5.5.3	The report must include an analysis of any problems of a systemic nature.	Full compliance	The report contains comments in respect of each of the Customer Service Indicators and many of these refer to problems of a systemic nature relevant to the given Indicator.
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 compliance	The report required by this clause was integrated into the report required by Sydney Water under clause 4.7.3.

7.4 Discussion

7.4.1 Customer Contract

The Customer Contract sets out the rights and obligations of Sydney Water and customers with respect to the services provided in accordance with its Operating Licence.

The Operating Licence contains the procedural clauses relevant to the Customer Contract.

The audit involves measurement of the degree of compliance with both sets of requirements as set out in these documents. This section deals with the requirements of the Operating Licence, while Appendix F concerns compliance with the Customer Contract.

The level of compliance with the relevant clauses of the Operating Licence was 'High' or 'Full compliance'.

The customer survey reports and the Operating Licence Compliance Report (OLCR), referred to in the summary at the beginning of this Chapter, were used to measure the degree of compliance with the Customer Contract. As a result, the auditor is reliant upon the methods used by the organisations collecting much of the data and the level of rigour and independence applied to the task. However, Sydney Water's ability to capture detailed and useable information about its operations and its level of service has increased during the audit period and this has enhanced the depth of information available.

Sydney Water does not have a current survey of commercial and industrial customers which could be used to determine their level of satisfaction with the performance of the organisation. This remains one area where Sydney Water could improve its data collection.

There were no clauses of the Customer Contract where Sydney Water's performance fell below 'High Compliance', with performance in respect of many of the clauses resulting in 'Full Compliance'. Nevertheless it was evident that there had been increases in the number of properties affected by planned and unplanned interruptions to their water supply and dry weather sewerage overflow events, as well as a high number of complaints related to overcharging and metre misreads. Overall complaints were on the rise when compared with the last two years. The underlying systemic issues are outlined in the OLCR and some of the issues relate to the ongoing drought. Nevertheless, this underlines the importance of having refined and effective emergency response and complaint handling mechanisms to complement the asset management programs in the resolution of these issues.

The Emergency Contact Survey Report indicated that there are areas where complaints handling and service crew performance could be improved and, due to the increasing importance of these staff and resources, is an area where further training in customer liaison and information provision would be beneficial. The high number of billing complaints and metre misreads is also an area where attention could be directed to ensure continued compliance with the terms of the Customer Contract.

5.4.2. Consumers

The Operating Licence stipulates that Sydney Water is required to deal with all complaints under the Customer Contract as if the complainants are consumers. This is a fundamental clause ensuring that the same standards of service provision are made available to all those who are likely to be affected by the activities of Sydney Water. The organisation achieved 'Full compliance' in this regard, establishing that the same policies and procedures were available to, and applied to, all groups and, in the case of tenants, that special policies were applied to assist them with issues regarding payment for water usage.

5.4.3. Code of Practice and Procedure on Debt and Disconnection

The Operating Licence contains clauses regarding the requirement to have a Code in place and what it must provide for, as well as clauses regarding the dissemination of information about the Code. Sydney Water achieved 'Full Compliance' in this regard. These requirements are reflected in clause 5 of the Customer Contract, which requires that various options for account relief are available to customers and that customers must be made aware of these options. Once again 'Full Compliance' was achieved. Details of the number of customers obtaining different types of assistance are set out in Clause 5 of Appendix F.

The Code of Practice and Procedure on Debt and Disconnection contains provisions that are intended to provide special assistance to disadvantaged and low income customers. It also specifies how debt recovery will take place and the circumstances that would result in disconnection or restriction of supply. The Customer Contract also has provisions at Clause 6 dealing with disconnection or restriction of supply of water and sewerage services. Sydney Water fully complied with these clauses despite reporting an increase in the number of flow restrictions enforced when compared with the previous year. There were no disconnections in the 2005/06 audit period.

5.4.4. Customer Councils

Sydney Water operates one Customer Council, the Corporate Customer Council. It effectively utilised the Council to obtain high quality advice on policy development during the audit period.

Sydney Water has made efforts to reinvigorate the Council as an effective management and policy formulation tool, as well as using the Council as a means of providing detailed service and operational information to the key stakeholders. This process should continue through the further and earlier clarification of members' representative roles, ensuring that the Council members are provided with the ability to attend briefings and workshops to extend their knowledge of topic areas and ensuring that they are involved in policy formulation at an early stage.

The audit report for 2004/05 also underlined the importance of ensuring that Sydney Water has a close association with the Sydney Metropolitan Catchment Management Authority with regard to customer and community consultation. Accordingly it would be beneficial if a delegate from the Authority were appointed to the Corporate Customer Council.

5.4.5. Customer Service Indicators

The Operating Licence which commenced in July 2005 introduced a new set of requirements regarding the maintenance of record systems that are sufficient to enable Sydney Water to accurately measure its performance against the Customer Service Indicators, set out in Schedule 2, and to report its performance against those indicators annually to IPART.

The system principally comprises three record management and contact and complaint management systems. These are known as Customer View, ACCESS (the accounts and billing system) and WAMS (the asset management system). Information is input into these systems by staff members making initial contact with customers at call centres and by those dealing with the ongoing management of the issue or complaint. Detailed protocols are in place for the operation, management and use of these systems and the integration of relevant information from all of them into aggregated spreadsheets. The information for the measurement of performance against the Customer Service Indicators is sourced from the latter.

The systems described above were sophisticated, and effective in compiling the relevant information. Nevertheless they are still relatively new and a process of continual improvement should be adopted in order to ensure their refinement and adaptability as information needs evolve over time. The high quality training of staff using the systems is essential in order to ensure their effectiveness and the accuracy of the information collected. While training programs are in place and an organisation wide approach is being taken, there is the opportunity for a more systematic training regime to be implemented, with regular checks of the effectiveness of the training and the competency of the staff. This is particularly the case where there are three systems being utilised and there is the possibility that staff may be using systems with which they are not fully conversant.

7.5 Factors Affecting Compliance

7.5.1 Customer Contract

As outlined above, the clauses within the Customer Contract itself were evaluated as either 'High' or 'Full compliance'. Where compliance is measured other than in relation to a specific benchmark the results often reflect the outcomes of customer satisfaction surveys referred to above. If the response recorded by customers was so positive that there was no opportunity for improvement by Sydney Water then the performance in relation to the clause was judged as 'Full compliance'. If a substantial proportion of customers provided positive feedback through the surveys then the relevant clause was judged as having 'High compliance'. This approach is taken to acknowledge the importance of working towards continual improvement of policies and procedures within the organisation.

7.6 Recommendations

7.6.1 Key Recommendations

It is recommended that Sydney Water:

- R5.1 Conduct an annual customer survey with industrial and commercial customers to provide feedback on the performance of Sydney Water.
- R5.2 Continue to implement programs for the improvement of the skills assessment and training of relevant staff in the use and application of the three record and complaint handling computer systems (Customer View, ACCESS and WAMS) and systematically check the effectiveness of that training.

7.6.2 Secondary Recommendations

It is recommended that Sydney Water:

- R5.3 Continue to implement programs for the improvement of skills assessment and training of service staff and repair crews in order to address the issues raised in the Emergency Contact Survey Report and conduct assessments of the effectiveness of the training.
- R5.4 Conduct detailed analysis of the underlying causes of billing and account complaints, and meter misread complaints and take steps to reduce the incidence of these complaints.



- 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.

8. Complaint and Dispute Handling

8.1 Summary of Findings

» Internal Dispute Resolution

Sydney Water has established and maintained complaint handling procedures as required by clause 6.1.1 of the Operating Licence and obtained **Full compliance** in this regard.

The Operating Licence states that the complaints handling procedures must comply with the Australian Standard, which was, for the majority of the audit period, AS 4269-1995 Complaint Handling. The Australian Standard was changed in April 2006, to the International Standard ISO 10002:2004 MOD. However, reporting for this audit period was carried out in relation to the prior Standard, with reporting to the new standard to commence in 2006/2007. Sydney Water obtained **High compliance** with the requirements of the clause regarding adherence to the Australian Standard. The majority of the issues raised in the 2004/05 audit had been addressed and a further qualitative customer satisfaction survey had been prepared on Sydney Water's behalf.

The need for a more comprehensive skills assessment and training program for staff in complaint handling and dispute resolution, including face-to-face complaints handling and a formal assessment of the program's effectiveness, had also been addressed. Further refinement and improvement of the program is available under a 'continuous improvement' approach.

» External Dispute Resolution

The Energy and Water Ombudsman NSW (EWON) continues to be the mechanism adopted by Sydney Water for the independent review of customer complaints, which meets the external dispute resolution scheme requirements as set out in the Operating Licence.

Sydney Water achieved **Full compliance** with respect to all aspects of the scheme, including its operation, dissemination of information and reporting.

» Complaints to Other Bodies

There were two complaints that fell into this category in the audit period: one to the Consumer, Trader and Tenancy Tribunal (CTTT); and another to a Civil Court. The report required in relation to the CTTT obtained a **Full compliance** rating while the report regarding the court matter obtained a **High compliance** rating.

8.2 Summary of Requirements

Part 6 of the Operating Licence refers to Complaint and Dispute Handling. In summary, to comply with Part 6 of the Operating Licence, Sydney Water must:

- » Establish and maintain internal complaint handling procedures for receiving, responding to and resolving complaints by customers and consumers against Sydney Water;
- » Make information regarding its internal complaint handling procedures available to customers and consumers;

- » Establish or be a member of an industry based dispute resolution scheme for the resolution of disputes between Sydney Water and its customers and between Sydney Water and consumers by a dispute resolution body;
- » Prepare and provide to customers and consumers a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed;
- » Provide IPART with written reports regarding the determinations of dispute resolution;
- » Report annually to IPART on information obtained from the dispute resolution body, such as the number and type of complaints. This report must be available to the public free of charge;
- » Report to IPART annually on all complaints that relate to its performance under this Licence or the Customer Contract that were referred for resolution by an external dispute resolution body; and
- » Report to IPART annually on all civil actions regarding Sydney Water's failure to comply with a provision of the Customer Contract.



8.3 Details of Compliance

Table 8-1 Licence Part 6 – Complaint and Dispute Handling

Clause	Requirement	Compliance	Findings
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 compliance	Details of Sydney Water's complaint handling mechanisms are set out in Section 7 of this Audit Report (referring to Part 5 of the Operating Licence). In particular, see Table 7.1 clause 5.5.1. It is evident that Sydney Water has established, maintained and improved its complaint handling procedures for receiving, responding to and resolving complaints by customers and consumers.
6.1.2	The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS4269-1995 Complaint Handling.	High compliance	<p>Sydney Water indicated that the Australian Standard was changed in April 2006 and is now the International Standard ISO 10002:2004 MOD. Nevertheless this change occurred relatively late in the audit period and all surveys and reporting had been carried out in the context of the pre-existing Standard referred to in the Licence. Clause 14.2.5 of the Operating Licence appears to allow the replacement of the former Australian Standard by the new Standard. Thus it is anticipated that reporting in future audits should be carried out in accordance with the new Standard, and complaint handling policies and procedures will also reflect the new Standard.</p> <p>The Emergency Contact Survey reports for January to December 2005 and January to June 2006 were provided to the auditor, together with the summary of results for the audit period addressing the elements of the Australian Standard (AS 4269-1995) (<i>Effective complaints Handling, Compliance Reporting Measures</i>). Comments in the previous audit regarding the failure to address four of the 13 elements of the Standard were addressed in the latter report which was also supported by a further qualitative report <i>'Sydney Water Customer Relationship Measurement Program Qualitative Stage, September 2006'</i>. This report formed a valuable addition to the reporting carried out by Sydney Water and highlighted the generally positive reputation and performance of Sydney Water, but also indicated some areas where improvement could occur, such as in the area of appointment time frames.</p> <p>Details of material provided by Sydney Water regarding training of staff in complaint handling mechanisms are referred to in Section 7 Table 7.1 Sydney Water also provided a 'PowerPoint' presentation on customer complaints awareness, which was given by managers throughout the organisation in November 2005, with the objective that all staff would hear the presentation. This provided information on basic complaint handling issues and protocols. It</p>



Clause	Requirement	Compliance	Findings
			is clear that Sydney Water is working toward continual improvement of its customer relationships and complaints handling. Nevertheless, due to the lack of evidence of the comprehensiveness of the training regime, particularly in the call centres, together with evidence of continual verification of the effectiveness of training, a rating of full compliance cannot yet be assigned to this requirement. The relatively new computer systems and their integration into existing management systems require this level of caution as it is essential that the underlying skills, which make the new systems viable, be established and maintained.
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 compliance	The required information was included in the Summer 2005 'Water Wrap' pamphlet, which was distributed over October to December 2005, as well as in the 'Making it Crystal Clear' pamphlet distributed with the quarterly bills in the July quarter 2005.
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 compliance	See 6.1.3. above.
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. <i>[Note: The industry based dispute resolution body at the commencement date of this Licence is EWON – the Energy and Water Industry Ombudsman of NSW.]</i>	Full compliance	Sydney Water has been a member of the EWON scheme since 1 January 2000.
6.2.2	The industry based dispute resolution scheme so established by Sydney Water is subject to the Minister's approval.	No requirement	The scheme and Sydney Water's participation in the scheme, was launched by the Minister.
6.2.3	Sydney Water must prepare a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed.	Full compliance	Sydney Water provided a pamphlet 'Water Wrap, Customer Newsletter, Summer 2005'. The back of the pamphlet contained a brief summary of the EWON dispute resolution scheme and how it could be accessed. The Sydney Water website also contains information about EWON.



Clause	Requirement	Compliance	Findings
6.2.4	Sydney Water must provide the pamphlet to Customers through their quarterly or other bills, at least once annually.	Full compliance	Evidence was provided that the 'Water Wrap, Customer Newsletter, Summer 2005' was sent to all customers in the October quarter 2005. This replaced the previous format whereby a pamphlet regarding internal and external complaint handling was forwarded to 50 per cent of customers in October and the remaining 50 per cent in the following January.
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.	No requirement	As was the case in previous years, there were no complaints requiring 'determination' by EWON and therefore there was no need to report. (Note: The word 'determination' has a very specific meaning for EWON and refers to complaints about which a negotiated outcome between Sydney Water and the complainant was not possible and therefore had to be 'determined' by EWON. It does not refer to all the complaints referred to EWON and the outcomes of these complaints).
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 compliance	A report 'Customer Complaints received by the Energy and Water Ombudsman NSW,' an annual report for 2005/06, was prepared and forwarded to IPART by 1 September 2006. The report contained sections concerning 'EWON Contacts and Improvement Opportunities' and 'EWON Stakeholder Relations'. These sections of the report referred to the liaison between Sydney Water and EWON in order to continue the improvement of the complaints management process, identify the systemic issues giving rise to customer complaints and to improve customer service.
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.	Full compliance	The Annual Report contained detailed breakdowns and numbers of complaints received by EWON in relation to Sydney Water, both in terms of EWON categorisation of customer contacts (enquiries, refer to higher level, level 1 investigations, level 2 investigations, level 3 investigations and determinations) and the issues raised by customers (billing, credit, customer service, general, land, provision and supply).
6.2.6 (b)	Any other relevant information required by IPART to be included in the report.	No requirement	IPART did not require any other relevant information to be provided in the report.
6.2.7	The report in clause 6.2.6 must be made available to the public free of charge	Full compliance	The Report was made available on the Sydney Water website. A printout of the contents of the website as at 30 October 2006, provided to the auditor, referred to this Report.



Clause	Requirement	Compliance	Findings
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 compliance	A separate report was provided to IPART regarding complaints made to EWON. A compliance report ' <i>Report on Complaints To Other Bodies</i> ' was prepared and provided to IPART prior to 1 September 2006. This report discloses that one complaint was lodged with the Consumer, Trader and Tenancy Tribunal in the period 1 July 2005 to 30 June 2006 and that the claim was dismissed.
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 compliance	<p>A compliance report '<i>Civil Actions in All Courts</i>' was prepared and provided to IPART prior to 1 September 2006. This report discloses that there was one civil action brought against Sydney Water. However it is not clear from the report when the claim was actually lodged with the Court, the identity of the Court and the provision of the Customer Contract to which it relates. The report indicates that the first notification of the claim was received on 06/04/04 and that the claim was litigated on 27/06/06. The report also indicates that the claim remains unresolved.</p> <p>Further information on all insurance claims involving Sydney Water is now available on the new 'STARS' system. It is recommended that future compliance reports have more detailed information about claims to more completely fulfil the IPART requirements.</p>
6.3.3	The reports required under clauses 6.3.1 and 6.3.2 must contain the following information:		
6.3.3 (a)	The number and types of matters.	High compliance	The report provided pursuant to Clause 6.3.2 does not indicate what provision of the Customer Contract to which the civil action relates, stating only that it is a matter relating to bodily injury.
6.3.3 (b)	The outcome of the matters.	Full compliance	Both reports adequately describe the current status of the relevant matters.
6.3.3 (c)	if the matters were subject to a negotiated settlement, how they were settled.	No requirement	Neither of the reports related to 'settled' matters.



Clause	Requirement	Compliance	Findings
6.3.3 (d)	Any problems of a systemic nature arising from the matters or which the matters uncovered.	No requirement	There is only one matter identified in each of the report: one having been dismissed and the other litigated and unresolved. It is therefore unlikely that these matters would have uncovered any systemic issues.
6.3.3 (e)	Any other information that IPART may reasonably request.	No requirement	No further information was requested by IPART.

8.4 Discussion

8.4.1 Internal Dispute Resolution Processes

Sydney Water's internal dispute resolution system is described in Section 7 of this audit Report under the heading 'Customer Service Indicators' and also under the heading 'Customer Contract'. There has been considerable improvement of the system since the time of the last audit. Steps have been taken toward the integration of the three record management and complaint handling systems, although they are still operated as discrete systems with the capacity to collate and aggregate the information collected.

The Operating Licence requires that the dispute resolution scheme be based on the Australian Standard for complaint handling (AS 4269-1995). The Australian Standard has now been changed to International Standard ISO 10002:2004 MOD. Reporting to this new standard will commence in the next audit period.

The definition of complaint is contained in the Australian Standard (AS 4269-1995). The integrated system for the collection of information about complaints operates according to the interpretation of this definition, which is contained in the Measurement and Reporting Protocol between Sydney Water and IPART. This altered interpretation, which was implemented at the beginning of the audit period, resulted in the need for the modification of data collected in prior periods where some matters which are no longer considered to be complaints were included in the complaint category totals. The intent of the change ensures reporting of complaint matters is confined to instances where contact is initiated for purposes not related solely to the exchange of information. This is intended to assist in the accuracy and usefulness of the data as a management tool.

One of the main tools used for the assessment of the effectiveness of complaint handling and complainant satisfaction is the Emergency Contacts Survey. This survey has been improved to provide more data relating to compliance with the standard and a further report has also been provided – *Sydney Water Customer Relationship Measurement Program Qualitative Stage*, September 2006. These reports more adequately address compliance with the Standard. The discussion in Section 7 addresses some of the issues which have arisen from the results of these surveys.

The training of staff and the implementation of an integrated program is another area where continual improvement has occurred. Nevertheless this remains an area where further improvement is available and recommendations in this regard are made in Section 7.

8.4.2 External Dispute Resolution Scheme

The Energy and Water Ombudsman NSW (EWON) scheme continues to be the mechanism adopted by Sydney Water through which customers can obtain an independent review of their complaint.

The requirements of the Operating Licence in relation to this scheme have been modified in the new Licence. The changes recognise that EWON has its own set of legislative requirements and internal systems and protocols to ensure that it operates efficiently, fairly and informally. Accordingly these issues are longer the subject of specific clauses in the Sydney Water Operating Licence. The main obligations of Sydney Water are to provide to IPART adequate reports of the number and type of matters referred to EWON and to ensure that information, about the scheme, is made available to the public. Sydney Water achieved Full compliance in this regard.

8.4.3 Complaints to Other Bodies

Two complaints to other bodies were made during the audit period. Sydney Water prepared reports in relation to each category of matter as required by the Operating Licence. The report concerning the matter referred to a Civil Court did not have sufficient information about the date of commencement of the claim, the clause of the Customer Contract to which it related and the identity of the court.

8.5 Factors Affecting Compliance

No comments in addition to those set out in the discussion above

8.6 Recommendations

8.6.1 Key Recommendations

(Note: Recommendations concerning the internal dispute resolution scheme as set out in Section 7 of this report).

It is recommended that Sydney Water:

- R6.1 Refine the reports regarding 'complaints to other bodies' to include when claims are commenced, the clause of the Customer Contract to which they relate and the court in which they are commenced.

8.6.2 Secondary Recommendations

Nil

9. Environment - Indicators and Management

9.1 Summary of Findings

» Environmental Indicators

Sydney Water received **Full compliance** for the monitoring, recording, compiling of data and reporting on its performance against the Environmental Performance Indicators (EPIs) identified in Schedule 3 of the Operating Licence for 2005/06. (Performance against each environmental indicator is presented in the “*Schedule 3: Environmental Performance Indicators Compliance Report 2005/2006*”).

Sydney Water has in place a comprehensive system to ensure that the EPIs are monitored and reported.

Sydney Water received **Full compliance** for the requirement to report its performance against the EPIs to IPART by 1 September 2006.

Sydney Water received **Full compliance** for the requirement to provide a year-to-year comparison of performance against the EPIs. Sydney Water obtained **High compliance** for comparing the 2005/06 monitoring result with comparable values obtained over the previous 10 years.

The requirement to make the report, describing performance against the environmental indicators, publicly available was met with **Full compliance**.

» Environmental Management

Full compliance was awarded for Sydney Water having in place an Environmental Management System (EMS) that has been certified to AS/NZS ISO 14001 by an accredited certifier as of 3 May 2005.

Sydney Water received a **Full compliance** for the requirements to prepare an *Environment Plan 2005-2010* by 30 September 2005, update the Plan annually and engage in consultation for the preparation and review of the Plan.

Sydney Water obtained **Full to High compliance** for the requirements to include specific strategies, objectives, targets and timetables in the Environment Plan. **Full compliance** was also awarded for the requirements for the Environment Plan to endorse ESD Principles and to be integrated into its Business Plans, although there was scope to improve the transparency of the latter requirement.

Full compliance was awarded for the requirement for the Environment Plan 2005-2010 to be available on Sydney Water’s website for downloading, free of charge.

Sydney Water prepared the Environment Plan 2005-2010 Progress Report to describe its achievements in meeting the Environment Plan. A provisional Progress Report was provided to IPART on 1 September 2006. It has been agreed with IPART that the final Progress Report will be provided by this date each year, and therefore **High compliance** was awarded.

Sydney Water received **Full compliance** for the requirement to review the Environment Plan, annually. Sydney Water wrote to DEC, the Department of Planning, and peak environmental non-

governmental organisations and invited comment on the Environment Plan in December 2005 and, subsequently, produced an amended draft Plan by the end of the audit period.

» **Potable water use at Sewerage Treatment Plants (STPs)**

Sydney Water obtained **Full compliance** for reporting to IPART on its progress in relation to replacing the use of potable water at its STPs with recycled water for treatment processes.

» **Metering of individual units (multi-unit dwellings)**

Sydney Water obtained **Full compliance** with the requirement to 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, with an individual meter, which is read on a quarterly basis.

9.2 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:

- » 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;
- » Have in place an environmental management system certified to AS/NZS ISO 14001;
- » 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;
- » Report annually on its progress in meeting the requirements of the Environment Plan;
- » 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;
- » Undertake potable water efficiency audits at selected sewage treatment plants and implement the findings under a water conservation plan; and
- » Conduct a trial to determine the costs and benefits of metering water use in each unit of multi-unit buildings.



9.3 Details of Compliance

Table 9-1 – Licence Part 7 - Environmental Indicators and Management

Clause	Requirement	Compliance	Findings
7.1 - Environmental Indicators			
7.1.1	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>Sydney Water monitored, recorded, compiled data and reported on its performance against the environmental performance indicators (EPI) identified in Schedule 3 of the Operating Licence for 2005/06.</p> <p>Sydney Water has in place a comprehensive system to ensure that the EPIs are monitored and reported. There are 21 EPI categories requiring reporting on 43 different parameters. Clause 2.4 of the Operating Licence requires Sydney Water to develop a monitoring and reporting protocol to describe how Sydney Water will record, compile, monitor, measure and report against the EPIs in Schedule 3 (<i>inter alia</i>). Sydney Water prepared the “<i>Monitoring and Reporting Protocol</i>” and IPART confirmed the protocol complies with the requirements of the Operating Licence in May 2006.</p> <p>For each EPI, the following attributes are identified in a “Performance Indicator Sheet”:</p> <ul style="list-style-type: none"> » Definitions; » Key processes and systems to collect the data; » Key responsibilities; » Procedure manuals and work instructions; and » Data collection and reporting process. <p>The collection of data is managed through the “Folios of Progress” which is a component of the Corporate Compliance Program. There is one Folio (or file) for each EPI. Each Folio identifies key contacts, the background to the EPI, definitions and assumptions, the performance for the reporting period, whether targets are met, any corrective action that needs to be adopted and a commentary.</p> <p>The auditor sighted the Performance Indicator Sheets and the Folios of Progress for each EPI.</p>



Clause	Requirement	Compliance	Findings
			<p>Sydney Water used the information from each Folio to prepare the “<i>Operating Licence Compliance Report 1 July 2005 to 30 June 2006</i>”. Section 3, Part 2 of this report is the “<i>Schedule 3: Environmental Performance Indicators Compliance Report</i>”. This report describes performance against each EPI and is made available publicly.</p> <p>Sydney Water engaged an “independent verifier” to verify the integrity of the data and the resulting report. The independent verifier concluded that the data in the Annual Report, which includes the EPIs, “<i>is an appropriate representation of Sydney Water’s environmental ... performance during the reporting period</i>”.</p> <p>Monitoring for each EPI was undertaken for the full financial year (2005/06).</p> <p>All the indicators identified in Schedule 3 were monitored and reported.</p> <p>The Operating Licence requires an assessment of Sydney Water’s compliance with the EPIs. This assessment for each EPI is presented in Appendix I and discussed in Section 7.4.1. of this audit report</p>
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 compliance	<p>Sydney Water reported its performance against the EPIs to IPART on 1 September 2006 evidenced by the letter of transmittal.</p> <p>A provisional report was provided in accordance with the approved protocol – see below. The provisional report was a draft “<i>Environmental Performance Indicators Compliance Report</i>” and not a copy of the Folios of Progress.</p> <p>IPART approved the manner of the reporting on 3 May 2006. The short time period between the end of June and end of August lead IPART to approve the submission of a Provisional Report utilising the Folios of Progress. However, Sydney Water was able to produce a draft report in the short time available.</p> <p>Sydney Water intends to provide the final “<i>Environmental Performance Indicators Compliance Report</i>” to IPART as part of the Annual Report in late 2006. The Annual Report was tabled in Parliament on 30 November 2006.</p>
7.1.3	The report must provide information that 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	High compliance	<p>The “<i>Environmental Performance Indicators Compliance Report</i>” provides a year-to-year comparison of performance against the EPIs. Data for year-to-year comparisons is provided in formats that include tables, graphs and bar charts – making trends apparent and clear.</p>



Clause	Requirement	Compliance	Findings
	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.		<p>Sydney Water generally provided data for the previous 10 years, where comparable data were available but in some instances data were not provided.</p> <p>Performance information for some indicators was reported for only one year or a few years, including, for example, <i>"Suspended solids capture rate for inland STPs and ocean STPs"</i>, <i>"Water treatment residuals reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced"</i>, <i>"Total area of clearing of native vegetation"</i> and <i>"Total area of native vegetation gain due to site rehabilitation, restoration or replanting by Sydney Water"</i>.</p> <p>Some of these parameters were added to the Licence that commenced 1 July 2005 for the first time and had not previously been recorded to the accuracy required for public reporting or in the form that is now required by the Licence. For example, there was previously no requirement for Sydney Water to monitor suspended solids in influent at all STPs and so the suspended solids capture rate could not be reported accurately for previous years.</p> <p>Sydney Water advised that if historical data does exist and was not included; it was because the data was not at an appropriate level of quality to be statistically reliable for use as a publicly reportable indicator. However, performance for some indicators in some years was not reported, yet it was apparent that Sydney Water would have the information. Examples include the "total number of prosecutions and Notices under the Protection of the Environment Operations Act", "the number of State heritage listed sites with Conservation Management Plans" and "total number of noise complaints". As a result, a Full compliance could not be awarded.</p> <p>Refer to Appendix I for an assessment of compliance for each EPI identified in Schedule 3 of the Licence.</p>
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 compliance	<p>Sydney Water has adopted a protocol to release the report on its performance against the environmental indicators as part of the Annual Report. The Annual Report is due for release according to the provisions of the Annual Reports (Statutory Bodies) Act 1984.</p> <p>Sydney Water now combines a number of regulatory reports into its Annual Report and this is supported by IPART. Sydney Water confirmed that the <i>"Environmental Performance Indicators Compliance Report"</i> was made available to the public as part of the Annual Report, which was tabled in Parliament on 30 November 2006.</p> <p>Sydney Water confirmed that it will print the report and provide a copy upon request.</p> <p>Sydney Water confirmed that it will place the report on its website for downloading free of charge following release of the Annual Report. (This occurred on 4 December 2006.) The</p>



Clause	Requirement	Compliance	Findings
			Annual Report (including the Environmental Performance Indicators Compliance Report) will be provided to all public libraries, and Council and non-government environment centres in Sydney Water's area of operations.
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 ISO 14001 to manage environmental risk.	Full compliance	<p>Sydney Water has in place an Environmental Management System (EMS) that has been certified to AS/NZS ISO 14001 by an accredited certifier as of 3 May 2005 (namely, more than two months before the required time).</p> <p>The EMS covers the full spectrum of Sydney Water operations related to water, sewer and stormwater. There is also an Integrated Management System for the wastewater business which has an EMS for wastewater integrated into its functioning – this EMS is also separately certified.</p> <p>Environmental risk is managed through a series of protocols and documents that form part of the EMS. For example, the <i>Environmental Aspects and Impacts Procedure</i> outlines the process for identifying, documenting and assessing the various aspects of Sydney Water activities that are determined to cause, or have the potential to cause, environmental impacts. The <i>Environmental Risk Management Procedure</i> describes the process used to rank all the impacts identified in the <i>List of Significant Environmental Impacts</i>. Other procedures cover requirements in the Standard for environmental planning, legal obligations, implementation, emergency preparedness, operations, reviews, etc.</p> <p>The auditor sighted the procedures and risk tables.</p>
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 compliance	<p>Sydney Water prepared the <i>Environment Plan 2005-2010</i> and published it on the Sydney Water website on 30 September 2005.</p> <p>Sydney Water reviewed the Environment Plan 2005-2010 during 2006 and released a revised Environment Plan 2006-2011 on 1 July 2006. The auditor sighted both Environment Plans.</p> <p>Sydney Water prepared and reviewed the Environment Plan in accordance with the <i>Environmental Planning Procedure</i> – controlled document number SWEMS0004 in the EMS. The procedure defines the requirements for the development, implementation and annual review of the five-year Environment Plan and its integration with the Corporate, Divisional and Business Planning processes. The procedure establishes a framework to help ensure objectives, actions and targets are developed to manage the organisations significant environmental risks.</p>



Clause	Requirement	Compliance	Findings
7.2.3	Sydney Water must engage in Public Consultation in developing the Environment Plan required by clause 7.2.2.	Full compliance	<p>The <i>Environmental Planning Procedure</i> describes the public consultation required during both the development phase and annual review of the Environment Plan.</p> <p>The draft Plan (2005-2010) was placed on the Sydney Water website in June 2005. Sydney Water advertised on 22 June 2005 in a major Sydney newspaper that the draft Environment Plan was available for comment and invited submissions. The draft Plan was also provided on 17 June 2005 to the peak non-government organisations, designated in the Licence, for comment.</p> <p>Sydney Water documented its response to the submissions received in a Public Consultation Report.</p>
7.2.4	The Environment Plan must:		
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;	Full compliance	<p>The Environment Plan 2005-2010 contains objectives, actions and targets for each of:</p> <ul style="list-style-type: none"> • Water supply (Objective 1); • Waste water management (Objective 3); • Stormwater (within its jurisdiction) (Objective 5); • Energy management (Objective 8); • Waste minimisation (Objective 6); • Heritage management (Objective 7); • Botany wetlands (Objective 7); and • Other environmental issues including natural resources management, environmental education and land contamination.
7.2.4 (b)	Endorse Ecologically Sustainable Development principles;	Full compliance	<p>The Environment Plan 2005-2010 states that it "<i>identifies the way in which Sydney Water is addressing one of its principal objectives, to protect the environment by conducting operations in compliance with the principles of ecologically sustainable development</i>". The Plan also interprets the Principles of ESD in relation to Sydney Water's responsibilities and specifically aims to develop sustainability planning tools and decision-making framework. Each objective in the Plan is identified according to the Principles of ESD that the objective supports.</p>



Clause	Requirement	Compliance	Findings
7.2.4 (c)	Be integrated into Sydney Water's business plans;	Full compliance	<p>The Environment Plan is a reflection of the Business Plans to the extent that reporting on progress in meeting the Environment Plan is compiled from reports on performance against the Business Plans. In effect, the components that make up the Environment Plan are a slice through Sydney Water's Business Plans. The 'slice' reflects the environmental aspects of each of the Business Plans.</p> <p>The auditor reviewed the Corporate Plan 2005-2010, Asset Management Division Business Plan 2005/06, Asset Solutions Business Plan 2005-2010, and Sustainability Division Business Plan Highlights 2006/07. The objectives and actions described in the Environment Plan were generally reflected in each of the Business Plans, although at times the reflection was distorted by seemingly not acknowledging KPIs or programs from the Environment Plan, including, for example, <i>"integrate heritage considerations into asset planning and maintenance processes by Feb 2006"</i>. This may be more related to the relative levels at which the different plans are pitched rather than an omission from the program.</p> <p>However, there would appear to be scope for improving the relationship between the documentation of the Environment Plan (which is a statutory document) and the documentation of the business plans of the Divisions. The Business Plans should more explicitly reflect the objectives, strategies and actions of the Environment Plan, even at the risk of becoming too detailed.</p>
7.2.4 (d)	<p>Incorporate the objectives of the energy management plan of Sydney Water to:</p> <ul style="list-style-type: none"> (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 compliance	<p>The Environment Plan 2005-2010 requires the Energy Management Plan 2004/05 – 2009/10 to be implemented. The Environment Plan identifies the following targets:</p> <ul style="list-style-type: none"> » Generate at least 20 GWh/annum of renewable electricity by 2010; » Reduce greenhouse gas production by 90,000 t per annum by 2010; » Reduce energy consumption in buildings by 25% between 1995 and 2005; and » Comply with the NSW Government's Energy Management Policy. <p>The Energy Management Plan requires 60 GWh of renewable energy by 2010 and the other targets are the same as specified in the Environment Plan.</p>
7.2.4 (e)	Incorporate environmental improvement targets and time tables for Sydney Water to achieve over the term of the Environment Plan.	High compliance	<p>The Environment Plan 2005-2010 incorporates environmental targets for each objective identified. The Plan also identifies a timetable for delivery of each target, except in a few instances where no time is specified. The use of the term "ongoing" for identifying the due date in the Environment Plan should be reviewed. Consideration should be given to establishing interim milestones or targets that have a specified delivery date instead of</p>



Clause	Requirement	Compliance	Findings
			specifying open ended actions and delivery times.
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 compliance	<p>The Environment Plan 2005-2010 was available on Sydney Water's website from 30 September 2005 for downloading, free of charge, until it was replaced on the website with the Environment Plan 2006-11 on 1 August 2006.</p> <p>Sydney Water will provide a copy of the Environment Plan, upon request, at its Head Office or at its Katoomba and Liverpool offices.</p>
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 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 compliance	<p>Sydney Water prepared the Environment Plan 2005-2010 Progress Report to describe its progress in meeting the Environment Plan.</p> <p>A provisional Progress Report was provided to IPART on 1 September 2006. The agreement with IPART is that the final Progress Report will be provided by this date each year, therefore a Full compliance cannot be awarded.</p> <p>Sydney Water placed the Progress Report on its website on 4 December 2006 for downloading, free of charge. Sydney Water will also make a copy of the report available, on request. The Progress Report is published as a component of the Annual Report, which is distributed to public libraries throughout the Sydney Water area of operations.</p>
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 compliance	<p>Sydney Water reviewed the Environment Plan during 2006. Sydney Water advised that it wrote to DEC, the Department of Planning, and peak environmental non-governmental organisations and invited comment on the Environment Plan in December 2005.</p> <p>Sydney Water considered the views of each submission and documented the results of its consideration.</p>
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	<p>Progress towards meeting the requirement for this clause by 30 June 2009 is high. At North Head, Sydney Water has met the requirement of reducing potable water consumption by 80% and is working towards the target at Bondi and Malabar STP's. Sydney Water presented data to confirm that the 2003/04 baseline potable water consumption for the nominated STPs.</p> <p>For North Head STP, Sydney Water reported a baseline potable water consumption of 577ML/year. The 2005/06 potable water consumption for North Head was 91ML/year. This</p>



Clause	Requirement	Compliance	Findings
			<p>represents a reduction of over 80%. This reduction was achieved by the commissioning of the recycled water plant capable of producing up to 2ML/day. Commissioning of the plant was verified by a report prepared by CHJY Freshwater entitled <i>Process Proving Period Report</i>, dated 10 February 2006.</p> <p>For Bondi STP, Sydney Water reported a baseline potable water consumption of 348ML/year. The 2005/06 potable water consumption for Bondi was 161ML/year. This represents a reduction of 53%. This reduction was achieved by the Bondi RIAMP works. Partial Completion Asset Handover Forms dated 26 July 05 and 29 June 2006 verified commissioning of the plant. Sydney Water has commissioned the Department of Commerce to undertake a water efficiency audit, which has identified additional opportunities to reduce potable water usage and meet the Licence condition target of 80% reduction by 30 June 2009. Sydney Water is currently considering the options identified by the water efficiency audit.</p> <p>For Malabar STP, Sydney Water reported a baseline potable water consumption of 523ML/year. The 2005/06 potable water consumption for Malabar was 199ML/year. This represents a reduction of 62%. This reduction was achieved by reducing leakage. These projects were noted in the Malabar Production Meeting minutes dated 22 March 2006. Sydney Water has commissioned the Department of Commerce to undertake a water efficiency audit for Malabar STP.</p>
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	<p>Progress towards meeting the requirement for this clause by 30 June 2009 is high. Sydney Water presented data to confirm the 2003/04 baseline potable water consumption for all STPs and storm flow sewage treatment plants.</p> <p>The data indicated that Sydney Water has achieved 85% recycled water use for treatment processes for all plants with the exception of Shellharbour (79%), Mt Victoria (72%) and Blackheath (83%) STPs. Sydney Water continues to investigate options at these STPs.</p> <p>It is further noted that across all STPs, Sydney Water has achieved 96% recycled water use for treatment processes.</p>
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	Sydney Water has commissioned potable water efficiency audits at all STPs. An audit program and a progress report were presented. The program indicated that all audits would be completed by June 2007.
7.3.4	By no later than 1 September each year, Sydney	Full compliance	On 1 September 2006, Sydney Water submitted its annual Operating Licence Compliance



Clause	Requirement	Compliance	Findings
	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.		Report to IPART describing progress against clauses 7.3.1, 7.3.2 and 7.3.3. This information is reported in this column for the respective clauses.
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	<p>Sydney Water conducted one trial to determine the costs and benefits and to identify any impediments to providing individual meters for each unit in new multi unit buildings. The auditor sighted:</p> <ul style="list-style-type: none"> » the briefing note to the Minister dated 28 June 2006 outlining the details of the trial; » a media release by the Minister entitled “<i>Sydney Water Remote Water Meter Trial Underway</i>”, 28 June 2006; and » evidence of covenants on the title of the property allowing Sydney Water access to the meters once in place. <p>Installation of the meters (manual reading) was undertaken between December 2005 and January 2006. Meter readings were taken in February and April 2006. This is consistent within the timeframe specified by this Licence clause.</p> <p>Sydney Water advised that it is installing equipment and cabling to trial remote recording meters during the 2006/07-audit period.</p>
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.	No requirement	<p>This report is due in September 2006, which is beyond this audit period.</p> <p>It is noted however, that at the time of the audit, Sydney Water provided a copy of a briefing note to the Minister and report entitled “<i>Pilot Metering Project Multi-Unit Individual Cold Water Metering Progress Report – 8 September 2006</i>”. This report should be assessed as part of 2006/07 operational audit.</p>

9.4 Discussion

9.4.1 Environmental Indicators

Sydney Water compiled a report on its performance against the Environmental Indicators, the *“Environmental Performance Indicators Compliance Report”*. The Licence requires that the report provide information to permit a year-to-year comparison and, where comparable data are available, to compare the performance over the previous 10 years. Thus, trends in environmental performance can be assessed and made apparent.

Data were compiled for every indicator and comparable data (where it existed) were presented for some 21 of the 43 environmental parameters that constitute the 21 Environmental Indicators. It should be noted that the definition used for some parameters has changed since monitoring was first required in the 1995-2000 Operating Licence and that new parameters were added to the Licence in 2005. Nonetheless, the 2005/06 compliance report forms a baseline on which monitoring in future years can build so that changes in performance can be assessed.

External factors such as population growth, drought and statutory requirements for increased environmental performance can negatively impact on some indicators (such as energy use), so the assessment and interpretation of performance needs to recognise and take account of the factors impacting on individual indicators. However, when the indicators are assessed together as a group, they provide a reasonable indication of the environmental performance of Sydney Water.

Sydney Water engaged an external auditor to verify the reliability of the data (not the accuracy of initial measurement) used to compile the environmental indicators. [The auditor, in fact, provides external assurance for all non-financial data that forms part of the Annual Report.] The auditor determined that some 14% of a sample of data in the draft Annual Report contained an error; and these errors were corrected prior to publication. The auditor concluded that the information was an appropriate representation of Sydney Water's environmental performance during the reporting period. However, the error rate reinforces the view that looking at the trends and overall performance, rather than focussing on a particular parameter or trying to interpret small changes in a parameter, best assesses environmental performance.

9.4.2 Environmental Management

Sydney Water now has in place an accredited Environmental Management System (EMS). An external auditor accredits the EMS to ISO14001.

The implementation and maintenance of the EMS will significantly contribute to ensuring that the environmental performance of Sydney Water has a sound basis.

The Licence requires the Environment Plan to be integrated into Sydney Water's Business Plans. While the Business Plans tend to be high-level documents and some components of the Environment Plan require lower level actions, the relationship between the plans is not as transparent as it could be.

The various Divisions of Sydney Water could make a more concerted effort to recognise more of the targets documented in the Environment Plan so that they are also documented in the Business Plans. This may contribute to better integration of environmental aspects into asset and capital works related projects.

9.5 Factors Affecting Compliance

No unusual factors affected compliance with requirements for the environmental indicators or environmental management.

The current drought is affecting the performance of Sydney Water in relation to some indicators, but this would historically be expected to occur in any prolonged dry period. For example, water consumption has declined as a result of mandatory restrictions and sewage effluent volume has declined.

9.6 Recommendations

9.6.1 Key Recommendations

It is recommended that Sydney Water:

- R7.1 Improves the integration of the Environment Plan with the Business Plans of the Divisions and the Corporation.

9.6.2 Secondary Recommendations

Nil

10. Water Conservation and Demand Management

10.1 Summary of Findings

» Water Conservation Target

Full compliance has been achieved by Sydney Water in taking 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 2011 through demand management measures including regulation, recycled water, leakage reduction, residential outdoor and indoor programs and its business program. Climate corrected demand is reported to be 335 litres per capita per day (LCD) for 2005-06.

Although there is some risk regarding the dependence on significant ongoing water savings for some major programs, Sydney Water has identified a range of other options (contingency measures) that could be implemented, if required, to reduce this risk of not achieving this target. New programs and pilot studies have identified an additional 28 LCD of savings that could be implemented before 2011, if required.

Full compliance has been given despite concerns raised in previous years. It is noted the previous Operating Licence 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. Thus, the requirements for compliance with the water conservation target, (in Section 9.1 of the Operating Licence), have been assessed to include the impact of water restrictions on water demand.

» Demand Management Strategy

Overall, Sydney Water demonstrated a high level of commitment to water conservation and demand management, having implemented, and continuing to plan programs and activities of a high international standard. The Corporation’s workforce and business processes were well versed on water conservation and demand management. This understanding is evident in its Corporate Plan (2006-2011); Sustainability Division Plan; Output/Actions and Responsibilities (2006/07); Environmental Management System (EMS) List of Significant Environmental Impacts 2005, and alignment of these plans with the Sydney Metropolitan Water Plan to achieve **High Compliance** for the Demand Management components of the Operating Licence.

» Reducing Discharges

There is no reuse target set by the Minister for Sydney Water at this time; therefore there is **No requirement** to meet any reuse water targets.

Sydney Water has undertaken actions to reuse 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, achieving **Full compliance** for this requirement.

» **Water Conservation rating and labeling**

Sydney Water has encouraged manufacturers of water appliances to improve the water use efficiency of these appliances through continuing support for the Water Efficiency Labelling and Standards (WELS) scheme as reported to IPART by 1 September 2006, achieving **Full compliance** for this condition.

» **Review of Part 9 of license**

There has been no directive from the Minister to review Part 9 of the Licence; hence there is **No requirement** for this condition.

» **Minister's Requirements – Industrial and Domestic Reuse**

The Report on Recycled Water Implementation was submitted to the Minister by 1 September 2006, achieving **Full compliance** for this condition. The report describes actions taken by Sydney Water during 2005/06, and in the future, to implement new recycled water opportunities, undertake reuse trials as part of the Every Drop Counts Business Program, identify advancements in recycling technology and assist development of recycling opportunities by third parties.

The Sewer Mining Policy was released in May 2006, achieving **Full compliance** for this condition.

10.2 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 Sydney Catchment Authority (SCA).

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

- » take action to reduce the quantity of water it draws, in accordance with water conservation targets;
- » report to IPART on its progress in complying with water conservation targets;
- » consider demand side management as the basis of planning for future provision of services, including addressing water leakages;
- » provide a report to IPART annually on implementation of the demand management strategy;
- » 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;
- » met the re-use water targets set by the Minister or Sydney Water;
- » generate re-use water from the sewage or effluent of customers and consumers;
- » report to IPART on its progress in meeting the re-use water target;



- » encourage manufacturers of water appliances to improve the water use efficiency of these appliances and report on these activities to IPART; and
- » report to the Minister on its actions during 2005/06 and its projected future actions to implement new recycled water opportunities, undertake re-use trials as part of the *Every Drop Counts* (EDC) Business Program, release the sewer mining policy, identify advancements in recycling technology, and assist development of recycling opportunities by third parties.



10.3 Details of Compliance

Table 10-1 Licence Part 9 - Water Conservation and Demand Management

Clause	Requirement	Compliance	Findings
9.1 – Water Conservation Target			
9.1.1	<p>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).</p> <p><i>[Note: The 1990/1991 baseline is 506 litres per capita per day.]</i></p>	Full Compliance	<p>Sydney Water demonstrated it has taken 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. These actions involve demand management measures including <i>regulation</i>, recycled water, leakage reduction, residential outdoor and indoor programs and its business program (<i>2005-2006 Water Conservation and Recycling Implementation Report (WCRIR)</i>).</p> <p>The audit found that all of the requirements of the condition have been met as documented in WCRIR.</p> <p>The ability to reduce the quantity of water (other than re-use) drawn from all sources to achieve the 2011 target of 329 LCD, however, is significantly dependant on the community's response to education programs and longer-term regulatory water conservation measures. Sydney Water has identified a range of new options that could be implemented if target savings from any current program are not achieved.</p> <p>It is noted the previous Operating Licence required that compliance with the water conservation target should take account of "an average year" [section 8.1.2.(b) of the previous SWC Operating Licence]. The <i>average year</i> was interpreted to mean that the assessment of compliance against the water conservation target eliminating 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.</p> <p>The requirements for compliance with the water conservation target in Section 9.1, therefore, has been assessed without taking any account of water restrictions – this approach has been confirmed with IPART.</p> <p>There remains a risk that the 2011 target would not be met if current water restrictions were lifted and no other measures were introduced.</p>



Clause	Requirement	Compliance	Findings
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 compliance	In assessing compliance with the water conservation target in clause 9.1.1, Sydney Water has undertaken reasonable adjustments for the effects of weather on water usage (Climate Correction Model) as reported in Appendix 4 of the WCRIR. The model has undergone previous independent review and found to be accurate.
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 compliance	The WCRIR was submitted to IPART before 1 September 2006 and reported on Sydney Water's progress in complying with the water conservation target in clause 9.1.1.
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 2005, and alignment of these plans with the Sydney Metropolitan Water Plan.
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 2006 and reported on Sydney Water's implementation of its demand management strategy for the previous financial year.
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	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.



Clause	Requirement	Compliance	Findings
	of wastage or loss, drought or emergency.		
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.
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.
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 Sections 2 and 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 in Section 1 of WCRIR and these plans are contrast against alternative water supplies in Appendix 5 of the report, sufficient to achieve Compliance for this condition.
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.
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.
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 19 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 20 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 2005-06 are reported in a format and content agreed between IPART and Sydney Water in Appendix 6, Tables 17 and 18 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.



Clause	Requirement	Compliance	Findings
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 compliance	Sydney Water has engaged a suitably qualified third party (Institute for Sustainable Futures, ISF) to verify the accuracy and soundness of its mathematical models for projecting future demands for water usage (it's <i>End Use Model</i> , EUM). A draft report, reviewing the EUM and its recalibration prepared by ISF dated April 2006, was considered by the audit team. Given the Licence period has only just commenced, it is considered that there is ample time for Sydney Water to report the results to IPART within the current Licence period, hence retaining full compliance for this condition.
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	There is no Re-use target set by the Minister or Sydney Water at this time.
9.3.2	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	Sydney Water has undertaken numerous actions 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. These actions (including agricultural and urban reuse, West Camden STP and Council reuse, Wollongong STP, North Head and Malabar STPs) are detailed in the WCRIR and the Report on Recycled Water Implementation submitted to the Minister on 1 September 2006.
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.	No requirement	Refer 9.3.1.

**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 compliance	Sydney Water has encouraged manufacturers of water appliances to improve the water use efficiency of these appliances through continuing support for the Water Efficiency Labelling and Standards (WELS) scheme as described in the WCRIR.
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 compliance	The WCRIR, which reports on Sydney Water's performance under clause 9.4.1 for 2005/06 was submitted to IPART by 1 September 2006.

9.5 – Review of Part 9 of Licence

9.5	<p>During this Licence IPART may review Part 9 of the Licence if the Minister directs it to do so.</p> <p><i>[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.]</i></p>	No requirement	There has been no directive from the Minister to review Part 9 of the Licence.
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**Minister's Requirements – Industrial and Domestic Reuse**

MR. 9.1	<p><i>"I require Sydney Water to investigate and implement all feasible options for industrial and domestic reuse. To this end, I require Sydney Water to report to me by 1 September 2006 on its actions during 2005/06 and projected future actions to:</i></p> <ul style="list-style-type: none"><i>• Implement new recycled water opportunities;</i><i>• Undertake reuse trials as part of the EDC Business Program;</i><i>• Release the sewer mining policy;</i><i>• Identify advancements in recycling technology; and</i><i>• Assist development of recycling opportunities by third parties."</i>	Full compliance	<p>The Report on Recycled Water Implementation was submitted to the Minister on 1 September 2006. The report includes actions taken by Sydney Water during 2005/06 and projected future actions to implement new recycled water opportunities, undertake reuse trials as part of the EDC Business Program, identify advancements in recycling technology and assist development of recycling opportunities by third parties. The Sewer Mining Policy was released in May 2006.</p>
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10.4 Discussion

10.4.1 Water Conservation Targets

The methodology used to determine “Actual Water Savings” in Table 17 Appendix 6 of the *Water Conservation and Recycling Implementation Report (WCRIR)* was discussed including a review of Institute for Sustainable Futures (ISF) Analysis of Water Savings reports (2003, 2004). Based on limitations of available data, it is considered that the methodologies adopted, sample size of participating households and control groups are of appropriate accuracy for the purpose of tracking progress towards the requirements.

The sustainability of WaterFix savings after retrofitting water efficient appliances was also assessed. Comparison of water savings between January 2000 and September 2002 demonstrated that savings are maintained over time (ISF, 2004). It was recognised that the effects of water restrictions during the review period complicated estimation of actual water savings and their duration over time. It is understood that additional reviews of water savings are proposed by Sydney Water covering a longer period of time, which should provide improved confidence in estimated savings and duration over time.

Average annual water savings from demand management since the 1990/91 baseline have been 7.1 litres per capita per day (LCD) (506 LCD to 400 LCD over 15 years; climate corrected, excluding effect of water restrictions, p5 WCRIR). Required average savings from 2007 to 2011 to achieve the 329 LCD target are twice (14.2 LCD / year) that achieved to date. Forecast water savings from Outdoor Education, water saving measures and pricing represent 45% of forecast savings between 2006/07 and 2007/08 (showing high dependence on these programs in that period when all current restrictions are lifted and compulsory regulatory measures were estimated to occur). Forecast savings from Outdoor Education, water saving measures and pricing are expected to represent 13% of total savings in 2010/11, ranked 5th behind recycling (20%), business programs (17%), leak detection (15%) and regulatory measures (15%). Sydney Water has noted that forecast water savings, based on permanent water saving measures, can only be implemented by Government and, therefore, are outside of its control.

Recognising the potentially significant impact of not achieving forecast savings for some of the major programs associated with Government regulations, Sydney Water has identified an additional 28 LCD of savings. These savings are derived from initiatives that could be considered for implementation prior to 2011, if required, to ensure the target is met. The new programs have been assessed using both economic and non-economic criteria as described in Appendix 5, WCRIR. The new programs are considered to be a proactive, practicable and beneficial initiative mitigating earlier concerns (refer to 2004/05 audit findings).

The ability to reduce the quantity of water (other than re-use) drawn from all sources to achieve the 2011 target of 329 LCD will be highly dependant on the community's response to education programs and longer-term regulatory water conservation measures. Sydney Water has consistently identified that its target is reliant on the actions of other agencies over which Sydney Water has no control. Given the complexity of influences, it is questionable whether compliance for the 2011 target can be meaningfully assessed in 2005/06. Suffice to say, Sydney Water is on line to achieve the targets under the existing programs and regulatory regime

10.4.2 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. More recently, the strategy has been demonstrated to be effective comparing forecast versus actual water savings (Appendix 6 of WCRIR).

Sydney Water's Draft Decision Support Manual (August 2006) should further aid consistency of data and approach towards effective demand side planning between different Divisions/groups involved in system planning, design and compliance/operations.

A consistent set of end-use and other demand side planning assumptions,, such as use of levelised costs (\$/kL or \$/ML saved), would further aid comparison between supply side and demand side servicing options, although this is recognised to be outside the audit requirements.

While the WCRIR provides costs and benefits of demand management programs, it is difficult to compare these directly with the cost of alternative water supplies. Sydney Water provided utility levelised costs for current demand management programs to the audit team, separately, which confirmed the ranking of programs in the report.

10.4.3 Reducing Discharges

Although there are no current targets set by the Minister or Sydney Water, Sydney Water is working towards the recycled water targets contained in the Metropolitan Water Plan (70 GL pa). Sydney Water is moving towards Integrated Water Cycle Management planning, including preparation of a Recycled Water Strategy and development of a combined water, sewage and stormwater servicing strategy for growth in the west of Sydney. It is considered that Sydney Water is progressing well in reducing discharges from its sewerage systems.

10.4.4 Water Conservation Rating and Labelling

Sydney Water has encouraged manufacturers of water appliances to improve the water use efficiency of appliances through continuing support for the Water Efficiency Labelling and Standards (WELS) scheme, as described in the WCRIR. It was noted that water efficient washing machines have grown significantly on the market since the introduction of the rebate system, supporting Sydney Water's positive contribution in this area.

During the audit interviews, Sydney Water demonstrated a good understanding of the market and suppliers of products under the WELS scheme. New products that must be registered and labelled from 1 July 2006 include clothes washing machines, dishwashers, taps and flow controllers, toilet equipment, showers and urinals.

The difference between Planned and Actual WaterFix costs for the Dept. of Housing (DoH) program were explained during the audit interviews by Sydney Water as being a result of more costly leak rectification and a delay between completing work, payment and recovering a portion of costs from DoH (cf. \$3.70/kL planned versus \$4.57/kL saved; Table 17, WCRIR).

10.4.5 Minister's Requirements – Industrial and Domestic Reuse

There are now 13 sewer-mining proposals under consideration of which 12 have been assessed by Sydney Water to be feasible.

Total new recycled water opportunities implemented in 2005/06 were confirmed by Sydney Water to include North Head STP (0.5 GL/yr), Rouse Hill (0.33 GL/yr) and Cumberland Golf Course (0.008 GL/yr) as described in the report to the Minister.

Expected new recycled water initiatives to be implemented in 2006/07 include Blue Scope Steel (7.3 GL/yr), West Camden (1.8 GL/yr), Royal Botanic Gardens (0.2 GL/yr), Penrith STP (0.07 GL/yr) and Shellharbour STP (0.03 GL/yr), as described in the report to the Minister.

Sydney Water reported that the new Sewer Mining Policy has been generally well received and its implementation to date has been quite effective. It is expected to take about 18 months from initial request for information to have a Sewer Mining Agreement in place. Sydney Water will generally require 1-3 months to review full applications, including a risk assessment. Sydney Water may consider bringing forward creation of a Sewer Mining Agreement to help proponents secure project funding.

Sydney Water advised that it has assisted a number of sewage treatment pilot schemes through its Every Drop Counts Business Program. It has also assisted with a number package/modular sewage treatment system trials, including at Kogarah and Beverley Park.

10.5 Factors Affecting Compliance

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

10.6 Recommendations

10.6.1 Key Recommendations

No significant recommendations directly affecting compliance have been identified in the audit.

10.6.2 Secondary Recommendations

It is recommended that Sydney Water:

- R9.1 Undertake additional reviews of water savings associated with demand management programs covering a longer period of time to provide improved confidence in estimated verses actual water savings and any changes over time;
- 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;
- R9.4 Consider recording and reporting on itemised costs associated with rainwater tank installations involving internal plumbing connections (for toilet flushing and/or laundry use) to improve planning assumptions; and



- R9.5 Consider recording an estimate of the roof area for rainwater tank installations to improve its planning assumptions.



Appendix A

Comparison of Sydney Water's Compliance Over Previous Years

Comparison of Sydney Water's compliance with the previous Licence

This Appendix provides a tabular comparison of the compliance levels attained by Sydney Water in the 2005/06 Audit period and over the four previous audit periods. As compliance for this audit period was assessed against the 2005/2010 Operational Licence and the previous years audits related to the 2000/05 operational licence, Table A-1 aligns the findings of this years audit with the "best fit" licence clause from the previous licence. For many clauses, the specific wording, between the two licences, has been modified hence the table should be used as a guide only.

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 an improvement in its overall compliance rating having achieved predominantly Full compliance with only a few exceptions, compared to predominantly High to Full compliance in the previous year;
- » Continued to achieve Full compliance with all *Drinking Water Quality* requirements; Achieved Full compliance with the *new System Performance Standards (SPS)*, set by this Licence, including *reporting* and *service quality* on SPS and *water leakage*;
Note: There are numerous (new) SPS clauses that did not impose a requirement on Sydney Water during this audit period and therefore were not auditable.
- » Achieved moderate compliance with the new requirement related to *response times for water main breaks* however the auditor noted that improved compliance with this clause could adversely impact on Sydney Water's performance with other SPS such as *water continuity*;
Note: There are numerous (new) SPS clauses to which there is "no corresponding clause" in the previous Licence.
- » Achieved an improved High to Full compliance with all *customer and consumer rights* requirements including improved performance related to the appointment of *Members to the Customer Council*;
- » Achieved an improved High to Full compliance with all *Complaints and dispute handling* requirements including improved transparency in reporting related to complaints to other bodies;
- » Continued to achieve High to Full compliance with all *Environmental – Indicators and management* requirements.
- » Achieve Full compliance with all the *water conservation and demand management* requirements. This was attributable to significant commitment by Sydney Water in this area and a change to the method used to calculate the water conservation saving (to include the savings attributable to the drought related water restrictions).

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	05/06	Former Clause	04/05	03/04	02/03	01/02
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	6.2.1(a)	FULL	FULL	FULL	FULL
3.1.1(b)	Comply with operating targets set out in the Fluoridation Code	FULL	No Corresponding Clause				
3.1.2	Health guidelines will prevail where there are inconsistencies	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	6.2.2	FULL	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.	FULL	6.3.1	FULL	FULL	FULL	FULL
3.2.1(a)	The plan must include system performance monitoring in the Plan to ensure quality control	FULL	6.3.2	FULL	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.	FULL	No Corresponding Clause				
3.2.1(c)	The plan must include the monitoring of health guideline values	FULL	6.3.2(a)	FULL	FULL	FULL	FULL
3.2.1(d)	The plan must include the monitoring of aesthetic guideline values	FULL	6.3.2(b)	FULL	FULL	FULL	FULL
3.2.1(e)	The plan must assess the quality of drinking water	FULL	6.3.4	FULL	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.	FULL	6.3.5	FULL	FULL	FULL	FULL
3.2.2	Sampling frequency and locations must be representative of quality of water supplied	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	6.4.1	FULL	FULL	FULL	FULL
3.3.2	Produce an Annual Drinking Water Quality Report to NSW Health to comply with clause 3.3.1	FULL	6.4.2	FULL	FULL	FULL	FULL

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
3.3.3	Must comply with requests from NSW Health to provide additional information	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.	FULL	6.5.1	NR	NR	NR	NR
3.4.2	Include Management Strategies in Plan	FULL	6.5.2	NR	NR	NR	NR
3.4.3	In preparing the plan have regard to concepts of good practice set out in the 1996 Guidelines	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:	NR	No Corresponding Clause				
3.4.4(a)	Prepare a report on any proposed amendments	NR	6.5.3	FULL	FULL	FULL	Full
3.4.4(b)	Prepare a report on any additional water quality improvements	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.	FULL	No Corresponding Clause				
3.5.2	Maintain Incident Management Plan	FULL	6.5.6	FULL	FULL	FULL	NR
3.5.3	Incident plan must contain procedures and protocols for managing incidents	FULL	6.5.7	FULL	FULL	FULL	NR
3.5.4	When preparing the incident plan, have regard to the concept of good practice set out in the 2006 Guidelines	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	6.7.1	FULL	FULL	INSUF	INSUF
3.6.2	Other grades supplied does not include drinking water but does include re-use water	NR	No Corresponding Clause				
3.6.3	Minister to resolve any conflict	NR	6.7.3	NR	NR	NR	NR
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	7.1.1	FULL	FULL	FULL	FULL

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
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	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.	FULL	7.5.1	Not previously reported			
4.5.3	Must maintain record systems sufficient to enable performance measurements against standards	FULL	No Corresponding Clause				
4.5.4	Must provide IPART with electronic access to records.	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	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	NR	7.3.2	Not previously reported			
4.6.3	Minister may publish the amendments in the NSW Government Gazette	NR	7.3.3	Not previously reported			
4.6.4	Any amendments to performance standards to be incorporated into customer contract.	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.	FULL	7.4.4	Not previously reported			
4.7.2	Where there is inconsistency, the decision of IPART will prevail	NR	No Corresponding Clause				
4.7.3	By 1 September each year must report to IPART performance against service quality and system performance standards	FULL	7.5.1	Not previously reported			
4.7.4	Must provide IPART with electronic access to records.	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	NR	No Corresponding Clause				

<i>2006-10 Operating Licence</i>			<i>2000/05 Operating Licence</i>				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
4.8 (b)	Must ensure assets are managed consistent with the lowest life cycle cost and acceptable risk	NR	No Corresponding Clause				
4.8 (c)	Must ensure assets are managed consistent with the whole life of the assets	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.	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	NR	No Corresponding Clause				
4.9.2(a)	Report must include description of the processes, practices and plans used to manage assets	NR	No Corresponding Clause				
4.9.2(b)	Report must include description of each asset group	NR	No Corresponding Clause				
4.9.2(c)	Report must include assessment of expected capacity of the assets	NR	No Corresponding Clause				
4.9.2(d)	Report must include assessment of major issues or constraints on current/future performance of the assets	NR	No Corresponding Clause				
4.9.2(e)	Report must include strategies and expected costs of future investment in assets	NR	No Corresponding Clause				
4.9.2(f)	Report must include progress in implementing the management of assets and any recommended improvements	NR	No Corresponding Clause				
4.9.2(g)	Report must include such other matters reasonably required by IPART	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	No Corresponding Clause				
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	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	No Corresponding Clause				
4.10.4	The provisions of clause 12 apply to audit under 4.10	NR	No Corresponding Clause				

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
4.10.5	The Minister must be advised of any such decision to audit and provided with a report on it's outcomes	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	No Corresponding Clause				
4.11.2	Must calculate level of water leakage using IPART approved methodologies and assumptions	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	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	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	No Corresponding Clause				
4.12.2	By 1 September each year report to IPART on water pressure control zones in the drinking water system	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	FULL	No Corresponding Clause				
4.12.4	By 1 September each year report to IPART on reticulation mains and reservoir zones	FULL	No Corresponding Clause				
4.13	Response time for Water mains breaks						
4.13.1	Response times to water main breaks and leaks	MOD	No Corresponding Clause				
4.13.2	Categorisation of Priorities 4,5,6 is to be finalised by IPART and published on Sydney Water Website	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	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	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	NR	No Corresponding Clause				

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
4.14.1 (b)	By June 2009 report to the Minister on service to Menangle/Menangle Park	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	NR	No Corresponding Clause				
4.14.2	Advise Minister of delays in meeting Targets	NR	No Corresponding Clause				
4.14.3	By 1 September each year report to IPART on progress towards compliance with clause 4.14.1	Full	No Corresponding Clause				
4.14.4	Stage 1 Priority Sewerage Program explanation	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	NR	5.1.1	NR	NR	NR	FULL
5.1.2	The Customer Contract automatically applies to persons specified in the Act	FULL	5.1.2	FULL	FULL	FULL	FULL
5.1.3	The Customer Contract is to set out the rights and obligations of customers and Sydney Water	FULL	5.1.3	FULL	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	FULL	5.1.4	FULL	FULL	FULL	FULL
5.1.5	Sydney Water must initiate an independent review of the Customer Contract	NR	5.1.5	NR	NR	NR	PARTIAL
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.	NR	5.1.6	NR	NR	NR	FULL
5.1.7	Within three months of the ministers adoption of the review report, Sydney Water must issue an amended Customer Contract	NR	5.1.7	NR	NR	NR	HIGH
5.1.8	Sydney Water must prepare a pamphlet	HIGH	5.1.8	NR	NR	NR	PARTIAL
5.1.8(a)	Provides a brief explanatory introduction to the Customer Contract;	FULL					
5.1.8(b)	Summarises the key rights and obligations of Customers, under the Customer Contract	FULL					
5.1.8(c)	Refers to the types of account relief available for Customers experiencing financial hardship	FULL					
5.1.8(d)	Contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operations.	HIGH					

2006-10 Operating Licence		
Licence Clause	Summary of Requirement	05/06
5.1.9	The pamphlet must be updated and disseminated free of charge	
5.1.9(a)	Customers, at least once annually with their quarterly or other bills	FULL
5.1.9(b)	Any other person on request	FULL
5.1.10	Sydney Water may enter into other contracts or arrangements for the supply of services	FULL
5.2	Consumers	
5.2	Must fulfil obligations under customer contracts relating to compliant handling and resolution procedures	FULL
5.3	Code of Practice and Procedure on Debt and Disconnection	
5.3.1	Develop a code of practice and procedure on debt and disconnection	FULL
5.3.2(a)	Provide for deferred payment or payment by instalment options for consumption bills	FULL
5.3.2(b)	Provide for the payment options referred to in (a) to be advised in consumption bills	FULL
5.3.3	Include the code of practice and procedure on debt and disconnection in its Customer Contract	FULL
5.3.4(a)	Disseminate information to Customers at least once annually with their quarterly or other bills	FULL
5.3.4(b)	Disseminate information to any other person on request	FULL
5.4	Customer Councils	
5.4.1	Establish and regularly consult with one or more Customer Councils	FULL
5.4.2	A Customer Council may be utilised by Sydney Water to provide high quality advice	FULL
5.4.3	Members must be appointed consistent with the licence	HIGH
5.4.4	Membership must include the specified groups	HIGH
5.4.5	Sydney Water may require members to serve on multiple Councils	NR
5.4.6(a)	Council must comprise members of any customer council prior to the Commencement Date	FULL

2000/05 Operating Licence				
Former Clause	04/05	03/04	02/03	01/02
5.1.9	FULL	FULL	NR	NR
5.1.10	FULL	FULL	FULL	FULL
5.2	Not previously reported			
5.2.1				
5.3				
5.3.1	NR	NR	NR	NR
5.3.2(a)	FULL	FULL	FULL	FULL
5.3.2(b)	FULL	FULL	FULL	FULL
5.3.3	FULL	FULL	FULL	FULL
5.3.4(b)	FULL	FULL	FULL	FULL
5.3.4(c)	FULL	FULL	FULL	FULL
5.4				
5.4.1	FULL	FULL	FULL	FULL
5.4.2	FULL	HIGH	FULL	FULL
5.4.4	MOD	FULL	NR	HIGH
5.4.5	MOD	FULL	FULL	FULL
5.4.6	NR	NR	NR	NR
No Corresponding Clause				

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
5.4.6(b)	Council must comprise any other person appointed by Sydney Water, consistent with clause 5.4.4	NR	No Corresponding Clause				
5.4.7	Term of members is two years	NR	5.4.7	NR	NR	FULL	FULL
5.4.8	Half the members of a Council must be new members	NR	5.4.8	NR	NR	NR	HIGH
5.4.9	No person may have more than two consecutive terms	NR	5.4.9	NR	NR	NR	NON
5.4.10	Appointments for the remaining term of the Council is possible if a position becomes vacant	FULL	5.4.10	NR	NR	NR	NR
5.4.11	If members of a Council are not individuals 5.4.8. and 5.4.9 do not apply	NR	5.4.11	FULL	NR	NR	FULL
5.4.12	Existing members will be eligible to be appointed for one term and other members for 2 consecutive terms	NR	No Corresponding Clause				
5.4.13	Development of a Customer Council Charter addressing the specified issues within 3 months	NR	5.4.12	FULL	FULL	NR	FULL
5.4.13 (a)	The role of the customer council.	FULL	5.4.12 (a)	Not previously reported			
5.4.13 (b)	Selection criteria on how members will be drawn from the community.	FULL	5.4.12 (b)	Not previously reported			
5.4.13 (c)	Information on how the customer council will operate.	FULL	5.4.12 (c)	Not previously reported			
5.4.13 (d)	Induction processes for new members.	HIGH	No Corresponding Clause				
5.4.13 (e)	A description of the type of matters that will be referred to the customer council.	FULL	5.4.12 (d)	Not previously reported			
5.4.13 (f)	Procedures for the conduct of customer council meetings	FULL	5.4.12 (e)	Not previously reported			
5.4.13 (g)	Communicating the outcome of the customer council's work to Sydney Water.	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.	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.	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	FULL	5.4.14	FULL	FULL	FULL	FULL

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
5.4.15	Provide the necessary information to enable the Council to discharge its tasks	HIGH	5.4.15	HIGH	HIGH	FULL	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.	HIGH	5.4.16	FULL	FULL	FULL	FULL
5.5	Customer Service Indicators						
5.5.1	Must maintain record systems to sufficiently enable measurement against indicators in schedule 2.	HIGH	No Corresponding Clause				
5.5.2	Report to IPART performance against indicators in schedule 2 by 1 September each year	FULL	No Corresponding Clause				
5.5.3	Report must include analysis of problems of a systematic nature	FULL	No Corresponding Clause				
5.5.4	Sufficient compliance if report is integrated into report required under clause 4.7.3	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	FULL	12.1.1	FULL	FULL	FULL	FULL
6.1.2	Must be based on Australian Standard AS4269-1995	HIGH	12.1.2	HIGH	HIGH	HIGH	HIGH
6.1.3	Must make available information concerning Internal complaint handling procedures	FULL	12.1.3	FULL	FULL	FULL	FULL
6.1.4	Must provide information in clause 6.1.3 to customers through their bills at least once annually	FULL	12.1.4	FULL	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	FULL	12.2.1	NR	NR	NR	NR
6.2.2	Dispute scheme established by Sydney Water is subject to Ministers Approval	NR	12.2.2	NR	NR	NR	NR
6.2.3	Prepare a pamphlet to explain scheme and how it operates	FULL	12.2.6	FULL	FULL	FULL	FULL
6.2.4	Must provide information to customers through their bills at least once annually	FULL	12.2.7	FULL	FULL	FULL	FULL
6.2.5	Provide IPART with written reports of the determinations made by the body	NR	12.2.8	NR	NR	NR	NR

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
6.2.6	Must report each year to IPART on the number and type of complaints received, including the following information:	FULL	12.2.9	FULL	FULL	FULL	HIGH
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.	FULL					
6.2.6(a)	Any other relevant information required by IPART to be included in the report.	NR					
6.2.7	The report in clause 6.2.6 must be made available to the public free of charge	FULL	12.2.10	FULL	FULL	FULL	FULL
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	FULL	12.3	NR	INSUF	INSUF	FULL
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	HIGH	12.3	NR	INSUF	INSUF	FULL
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.	HIGH	12.3(a)	NR	INSUF	INSUF	FULL
6.3.3(b)	The outcome of the matters.	FULL	12.3(b)	NR	INSUF	INSUF	FULL
6.3.3(c)	If the matters were subject to a negotiated settlement, how they were settled.	NR	12.3(c)	NR	INSUF	INSUF	FULL
6.3.3(d)	Any problems of a systemic nature arising from the matters or which the matters uncovered.	NR	12.3(d)	NR	INSUF	INSUF	NR
6.3.3(e)	Any other information that IPART may reasonably request.	NR	12.3(e)	NR	INSUF	INSUF	NR
7	Environment – Indicators and Management		9				
7.1	Environmental Indicators		9.1				
7.1.1	Monitor, compile data and report on environmental performance indicators	FULL	9.1.1	FULL	HIGH	HIGH	Partial
7.1.2	By 1 September each year report on performance against the indicators	FULL	9.1.3	HIGH	HIGH	HIGH	Partial
7.1.3	The Report to enable a year to year comparison	HIGH	9.1.4	FULL	HIGH	HIGH	Partial

2006-10 Operating Licence		
Licence Clause	Summary of Requirement	05/06
7.1.4	The Report to be made publicly available free of charge at Sydney Water offices and on the website	Full
7.2	Environmental Management	
7.2.1	Must have in place an environmental management system certified to AS/NZS ISO 14001 to manage environmental risk	FULL
7.2.2	By 1 September produce a 5-year Environment Plan	FULL
7.2.3	Must engage in public consultation in developing the Environment Plan	FULL
7.2.4(a)	The Plan must contain details of the environmental improvement program	FULL
7.2.4(b)	The Plan must endorse ESD principles	FULL
7.2.4(c)	The Plan must be integrated into business plans	FULL
7.2.4(d)	The Plan must incorporate the energy management plan	HIGH
7.2.4(e)	The Plan must incorporate targets & time tables for achievement over term of Plan	HIGH
7.2.5	The Plan must be posted on the website and made available for collection free of charge	FULL
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	HIGH
7.2.7	Review the Plan consulting with DEC, DIPNR, IPART and peak environmental groups.	FULL
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	NR
7.3.2	By 30 June 2009 ensure that specific sewerage treatment plants use at least 85% recycled water for treatment processes	NR
7.3.3	Must undertake potable water efficiency audits at specific sewerage treatment plants	NR
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	FULL

2000/05 Operating Licence				
Former Clause	04/05	03/04	02/03	01/02
9.1.5	HIGH	HIGH	HIGH	FULL
9.3	No Corresponding Clause			
9.3.1	NR	NR	NR	NR
9.3.2	NR	NR	NR	NR
9.3.3(a)	NR	NR	NR	NR
9.3.3(b)	NR	NR	NR	NR
9.3.3(c)	FULL	FULL	HIGH	NR
9.4	Not previously reported			
9.3.4	NR	NR	NR	NR
9.3.5	NR	NR	NR	NR
9.3.6	FULL	FULL	FULL	FULL
No Corresponding Clause				
No Corresponding Clause				
No Corresponding Clause				
No Corresponding Clause				

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
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	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	NR	No Corresponding Clause				
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	FULL	8.1.1(a)	LOW	Partial	Partial	Partial
			8.1.1(b)	MOD			
9.1.2	In assessing compliance make reasonable adjustments for the effects of weather	FULL	No Corresponding Clause				
9.1.3	Report to IPART by 1 September every year progress towards clause 9.1.1 target	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	8.2.2	HIGH	FULL	FULL	FULL
9.2.2	Provide Demand Management Strategy Implementation Report by 1 September each year	FULL	8.2.3	FULL	FULL	FULL	FULL
9.2.3(a)	The Report must estimate past, current and projected water uses and distinguish users	FULL	8.2.4(a)	FULL	HIGH	FULL	HIGH
9.2.3(b)	The Report must describe supply deficiencies	FULL	8.2.4(b)	MOD	Partial	HIGH	Partial
9.2.3(c)	The Report must identify conservation measures	FULL	8.2.4(c)	FULL	FULL	FULL	FULL
9.2.3 (d)	The Report must describe, cost and evaluate additional conservation measures	FULL	8.2.4(d)	INSUF	HIGH	HIGH	HIGH
9.2.3 (e)	The Report must describe future plans for water reclamation & strategies to alter water use practices	FULL	8.2.4(e)	HIGH	HIGH	FULL	FULL
9.2.3 (f)	The Report must evaluate cost of plans and alternatives	NR	8.2.4(f)	MOD	Partial	Partial	HIGH
9.2.3 (g)	The Report must prioritise and schedule the implementation of courses of action	FULL	8.2.4(g)	INSUF	HIGH	HIGH	Partial
9.2.3(h)	The Report must identify strategies for reducing water leakage	FULL	8.2.4(h)	HIGH	FULL	HIGH	HIGH

2006-10 Operating Licence			2000/05 Operating Licence				
Licence Clause	Summary of Requirement	05/06	Former Clause	04/05	03/04	02/03	01/02
9.2.3(i)	The Report must include components of a water balance table	FULL	No Corresponding Clause				
9.2.3(j)	The Report must include consumption of water across all sectors	FULL	No Corresponding Clause				
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	No Corresponding Clause				
9.2.4	Engage third party to verify mathematical models for future water demand	FULL	8.2.5	FULL	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.	NR	No Corresponding Clause				
9.3.2	Take action to generate Re-use water from the sewage or effluent	FULL	8.3.1	MOD	Partial	HIGH	Partial
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	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	FULL	8.4.1	FULL	FULL	FULL	HIGH
9.4.2	By 1 September each year, report to IPART on its performance under clause 9.4.1	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	No Corresponding Clause				
12.2	What the Audit Report is on						
12.2.1(b)	Sydney Water's Implementation of any Memorandum of Understanding	MOD	No Corresponding Clause				

Table A-2 provides a summary of compliance levels reached by Sydney Water in the 2005/06 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	2005/06
<i>Summary of Ministerial requirements arising from 2004/05 Operational Audit</i>		
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	MOD
	(b) 21 pressure zones created by June 2007.	HIGH
MR 9.1	"I require Sydney Water to investigate and implement all feasible options for industrial and domestic reuse. To this end, I require Sydney Water to report to me by 1 September 2006 on its actions during 2005/06 and projected future actions to: <ul style="list-style-type: none"> • Implement new recycled water opportunities; • Undertake reuse trials as part of the EDC Business Program; • Release the sewer mining policy; • Identify advancements in recycling technology; and • Assist development of recycling opportunities by third parties." 	FULL



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Appendix B

Audit Brief



Request for Tender

RFT No W2/2006
("RFT Reference")

Operational Audit of Sydney Water Corporation

Operational Audit of Hunter Water Corporation

Operational Audit of the Sydney Catchment Authority

Operational Audit of State Water Corporation

IMPORTANT NOTE

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

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.

Some Background on the Regulatory Environment and the Water Utilities

Sydney Water Corporation (Sydney Water) is a State Owned Corporation that provides water, sewerage and some stormwater drainage services to about 4 million people within Sydney, Blue Mountains and Illawarra regions.

Hunter Water Corporation (Hunter Water) is also a State Owned Corporation that provides water, sewerage and some stormwater drainage services to almost 500,000 consumers within the localities of Newcastle, Lake Macquarie, Maitland, Cessnock and Port Stephens.

The Sydney Catchment Authority (SCA) was established to manage water supply and protect catchments, supply bulk water and regulate activities within the catchments to improve water quality, protect public health and protect the environment. It has primary responsibility for Sydney's bulk water supply, which is drawn from the catchments of four major river systems – the Warragamba, Upper Nepean, Woronora and Shoalhaven. These catchments extend over 16,000 square kilometres and surround the Greater Sydney Metropolitan Region.

State Water Corporation (State Water) operates 21 dams and 280 weirs and river regulators to deliver bulk water to regional and rural NSW. It provides bulk water to river pumpers, irrigation companies, towns, farms, mines and electricity generators. State Water also delivers water for the environment as well as unlicensed stock and domestic users on regulated rivers.

The NSW Government has granted Operating Licences to these water utilities in accordance with the relevant enabling legislation (*Sydney Water Act 1994*, *Hunter Water Act 1991*, *Sydney Water Catchment Management Act 1998* and *State Water Corporation Act 2004*). A copy of the current Operating Licences can be found at www.sydneywater.com.au, www.hunterwater.com.au, www.sca.nsw.gov.au, and www.statewater.com.au. Licences for the metropolitan utilities include a requirement that an annual Operational Audit of the utility's performance against its obligations under the respective Licence be undertaken. The State Water licence is required to be audited every two years following an initial audit. This Request for Tender refers to these audits.

It is intended that staff from the Tribunal's Secretariat will chair all audit meetings. The role of the Secretariat staff at these meetings is to facilitate discussion and manage any difficulties that arise between the auditor and the utility. This arrangement will also allow the Tribunal to be fully informed of the progress of these audits.

These audits are used by the Tribunal as the basis for its reports on the utility's performance and recommendations to the relevant portfolio Minister. The Environment Protection Authority, the Department of Infrastructure, Planning and Natural Resources and NSW Health continue to regulate water utilities activities concerning the environment, their use of water resources and public health respectively.

NSW is a signatory to the National Water Initiative. An obligation under this inter-governmental agreement is that each State collects data on benchmark indicators from certain water utilities. The Water Services Association of Australia (WSAA) will co-ordinate the collection of the national data on behalf of the National Water Commission.

The audits of performance against the Operating Licences for both Sydney Water and Hunter Water will include audits of these NWI indicators. Indicator definitions are shown at <http://www.wsaa.asn.au/pdf/2006/nationalperformanceframework.pdf>. It should be noted that it will not be mandatory for utilities to provide data for all indicators in the WSAA document, only those designated as NWI indicators (73 indicators in total). Audit of other WSAA indicators will be voluntary. The Tribunal will provide the successful tenderer with an excel spreadsheet template to accommodate NWI data.

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:

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.

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 4.

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 4.

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 acknowledges 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 four Operational Audits, namely audits of Sydney Water Corporation, Hunter Water Corporation, The Sydney Catchment Authority and State Water Corporation. The audits of Sydney Water and Hunter Water will also incorporate an audit of benchmark indicators for the National Water Initiative (NWI).

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 2005 to 30 June 2006. For Sydney Water and Hunter Water the audit will also assess performance against NWI benchmark indicators.

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;
- b) assess the level of compliance achieved by the utility against each of the requirements of the Operating Licence, providing detailed supporting evidence for this assessment and reporting compliance according to the Tribunal's established compliance scoring methodology;
- c) assess and report on progress by the utility in addressing any comments made by the relevant portfolio Minister pertaining to previous audits (Attachment 1), providing supporting evidence for these assessments;
- d) for each section of the Operating Licence, identify factors (if any) that have affected the utility's performance for the period from 1 July 2005 to 30 June 2006. 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 requirements of the Operating Licence and detail of its compliance with each requirement 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. 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 2004/2005 round of utility audits set out in the following table.

Utility	Issue
Sydney Water	Water Conservation and Demand management, Water quality
Hunter Water	Drinking Water Continuity
	Debt and disconnection
SCA	Catchment Management, Water quality
	Performance Criteria

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 audit process must take account of any public submissions received and the views of relevant regulators (Department of Environment and Conservation, NSW Health and the Department of Natural Resources) 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 some training and guidance in audit concepts and procedures.

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 13 October, 2006.

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 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.

Timing

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

Activity	State Water	Hunter Water	SCA	Sydney Water
Start Contract	28 August	28 August	28 August	28 August
First Draft Audit Report	29 September	29 September	29 September	29 September
NWI excel report complete		13 October		13 October
Second Draft Audit Report	27 October	27 October	27 October	27 October
Discussion of Final Draft	4 December	4 December	4 December	4 December
Delivery of Final Draft	15 December	15 December	15 December	15 December

Formal written 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.

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 18 April 2006 ("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	Bob Burford
Telephone	(02) 9290 8408
Facsimile	(02) 9290 2061
E-mail	bob_burford@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.



Appendix C

Operating Licence

Operating

LICENCE

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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.



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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

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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).

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- 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;

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Infrastructure performance

- (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.

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- 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

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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.

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- 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.

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- 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.



Complaint and dispute handling

06

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.

06 Complaint and dispute handling

- 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 ISO 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.

07 Environment – indicators and management

- 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.



Pricing 08

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

Operational audits of this Licence

- 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.



Notices 13

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).

14 Definitions and interpretation

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> For the total number of water interruptions (being all Planned Water Interruptions and Unplanned Water Interruptions): <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The number of Properties (and the number expressed as a percentage of all Properties) which experience: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 2 Unplanned Water Interruptions 3 Unplanned Water Interruptions 4 Unplanned Water Interruptions 5 or more Unplanned Water Interruptions.
5 Frequency of main breaks	<ul style="list-style-type: none"> 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 Indicators

Service Quality and System Performance Indicator	Service Quality and System Performance Measure
6 Losses from the water system	<ul style="list-style-type: none"> Water leakage
7 Response time to breaks	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> 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).
<i>Sewerage system reliability</i>	
10 Frequency of Uncontrolled Sewage Overflows and Properties affected	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The number of Properties (other than Public properties) experiencing more than one Uncontrolled Sewage Overflow in dry weather: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> The number of Public properties experiencing more than one Uncontrolled Sewage Overflow in dry weather: <ul style="list-style-type: none"> on 2 occasions on 3 or more occasions. The number of Public properties experiencing more than one Uncontrolled Sewage Overflow in wet weather: <ul style="list-style-type: none"> on 2 occasions on 3 or more occasions.
12 Response times	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (a) minor property damage (b) minor environmental impact (including unpleasant odours) not posing a significant health risk.
13 Restoration time	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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: <p>“sewer main” means the main in the sewerage reticulation system between individual sewered Properties and sewage treatment plants, excluding Property connection sewers.</p> <p>“Property connection sewer” means a short sewer which connects the reticulation sewer main to the customer sanitary drain of a Property.</p>

SCHEDULE 2

Customer Service Indicators

Customer Service Indicator	Customer Service Measure
1 Complaints	<ul style="list-style-type: none"> Total number and the number per 1000 Properties of complaints received by Sydney Water.
2 Water supply reliability complaints	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Total number and number per 1000 Properties of complaints relating to account payments, financial loss, billing errors or overcharging.
6 Affordability contacts	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The percentage of complaints received by Sydney Water that are resolved: <ul style="list-style-type: none"> within 2 days within 5 days within 10 days.
9 Telephone calls to a primary contact number	<ul style="list-style-type: none"> Percentage of telephone calls received by a permanent primary advertised number of Sydney Water that are answered: <ul style="list-style-type: none"> within 15 seconds within 30 seconds.
10 Metered accounts where meter not read	<ul style="list-style-type: none"> Percentage of metered accounts of Customers that receive a bill not based on: <ul style="list-style-type: none"> an actual meter read during the year a business meter read for two consecutive years.
11 Customer contacts	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">Number of Flexipay cards issued.
18 Payment Assistance Vouchers	<ul style="list-style-type: none">Number and value of payment assistance vouchers utilised.
19 Customer Contract Rebates	<ul style="list-style-type: none">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
<i>Water conservation, reuse, recycling</i>	
1 Potable Water drawn	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Water leakage expressed as a percentage of potable water drawn.
4 Water recycled	<ul style="list-style-type: none"> 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.
<i>Water/effluent releases</i>	
5 Sewage effluent volume	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Total number of prosecutions and Notices (including Penalty Notices) issued to Sydney Water under the <i>Protection of the Environment Operations Act 1997</i>. Total number of prosecutions and Notices (including Penalty Notices) under the <i>Protection of the Environment Operations Act 1997</i> issued to contractors engaged by Sydney Water.
8 Overflows from the Sewerage System	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Total mass of heavy metals received under trade waste agreements with Sydney Water.
14 Waste	<ul style="list-style-type: none"> 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
<i>Additional indicators</i>	
15 Greenhouse gases	<ul style="list-style-type: none"> CO₂ equivalent emissions through purchase of electricity, fuel and gas.
16 Electricity	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Number of sites under the control of Sydney Water that present a significant risk of harm as defined under <i>the Contaminated Land Management Act 1997</i>.
18 Heritage	<ul style="list-style-type: none"> 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 <i>National Parks and Wildlife Act</i>.
19 Flora and Fauna	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Total number of odour complaints generated from the sewage treatment plants or the sewerage system.
21 Noise	<ul style="list-style-type: none"> 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	Liverpool (City)
Auburn	Manly
Bankstown (City)	Marrickville
Baulkham Hills	Mosman
Blacktown (City)	North Sydney
Blue Mountains (City)	Parramatta (City)
Botany	Penrith (City)
Burwood	Pittwater
Camden	Randwick
Campbelltown (City)	Rockdale
Canada Bay	Ryde
Canterbury	Shellharbour
Fairfield (City)	Sutherland
Hawkesbury (City)	Strathfield
Holroyd	Sydney (City)
Hornsby	Warringah
Hunter's Hill	Waverley
Hurstville (City)	Willoughby
Kiama	Wingecaribee (Part)
Kogarah	Wollondilly
Ku-ring-gai	Wollongong (City)
Lane Cove	Woollahra
Leichhardt	

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.]

SCHEDULE 5

Priority Sewerage Program

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

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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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer 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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

What you pay

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

Redress

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.

SCHEDULE 6

Customer Contract

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) says 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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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*.

SCHEDULE 6

Customer Contract

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.

SCHEDULE 6

Customer Contract

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 <ul style="list-style-type: none">• 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.

SCHEDULE 6

Customer Contract

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: <ul style="list-style-type: none">• 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.



Appendix D

Ministerial Requirements



New South Wales

David Campbell

Minister for Water Utilities
Minister for Small Business
Minister for Regional Development
Minister for the Illawarra

G0601028

Mrs Gabrielle Kibble
Chairman
Sydney Water Corporation
115-123 Bathurst Street
SYDNEY NSW 2000

Gabrielle
Dear Mrs Kibble

Operational Audit of Sydney Water Corporation 2004-2005

I am writing to you in relation to the Operational Audit Report for Sydney Water Corporation covering the period 1 July 2004 to 30 June 2005. As the Minister responsible for overseeing Sydney Water's performance against the requirements of the Operating Licence, I have considered the advice given by the Independent Pricing and Regulatory Tribunal (the Tribunal) on the Audit findings. I will table the Audit report in Parliament.

I am pleased to note that overall, the Audit revealed that Sydney Water performed strongly against the Operating Licence requirements, achieving full or high compliance with the majority of conditions. On the basis of the audit report and advice from the Tribunal, I have decided that no penalties will be imposed on Sydney Water. However, I note that there is room for improvement with respect to water conservation and I make the following comment.

In terms of the Water Conservation targets I note the auditors have concluded that Sydney Water would not have met the Operating Licence Water Conservation targets for 2004-2005 in the absence of water restrictions. The auditors also believe the 2010-2011 target may only be realised if an optimistic estimate of savings is applied and a focused and concerted effort to increase the level of reuse is implemented.

While I note that Sydney Water has undertaken a number of actions to promote water conservation, I support the Tribunal's suggestion that Sydney Water undertake specific water conservation strategies, as follows.

All correspondence to:
GPO Box 5341, Sydney NSW 2001
E: david@campbell.minister.nsw.gov.au
Fax: (61-2) 9228 3722

Ground Floor, 84 Crown Street
Wollongong NSW
Ph: (61-2) 4229 5744
Fax: (61-2) 4229 9113

Level 36, Governor Macquarie Tower
1 Farrer Place, Sydney NSW
Ph: (61-2) 9228 3777
Fax: (61-2) 9228 3722

Water Recycling

I require Sydney Water to investigate and implement all feasible options for industrial and domestic reuse. To this end, I require Sydney Water to report to me by 1 September 2006 on its actions during 2005/06 and projected future actions to:

- implement new recycled water opportunities;
- undertake reuse trials as part of the EDC Business Program;
- release the sewer mining policy;
- identify advancements in recycling technology; and
- assist development of recycling opportunities by third parties.

Leakage Reduction

I require Sydney Water to achieve forecasts for its flow meter and pressure zone divide valve and pressure reduction valve installation programs to June 2007:

- 18 flowmeters in 2005/06 and 50 in 2006/07, including 30 renewals;
- 21 pressure zones created by June 2007.

These programs will enable more zones to be defined where accurate Minimum Night Flow measurements can be made. This will, in turn, progressively improve the ability of Sydney Water to target high leakage areas and to confirm leakage reductions.

Please pass on my appreciation for Sydney Water's efforts over the past year. I thank you for the cooperation Sydney Water has given the auditors and IPART in the conduct of the Audit. I also look forward to seeing improvements to Sydney Water's efforts on water conservation.

Yours sincerely



David Campbell
Minister for Water Utilities
Minister for Small Business
Minister for Regional Development
Minister for Illawarra



Appendix E

Memoranda of Understanding



MEMORANDUM OF UNDERSTANDING

Between

SYDNEY WATER CORPORATION

and

ENVIRONMENT PROTECTION AUTHORITY

October 2002

October 2002

MEMORANDUM OF UNDERSTANDING

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Introduction

This Memorandum of Understanding provides the foundations for a co-operative relationship between the Environment Protection Authority and Sydney Water Corporation. In doing so, it reflects the requirements of section 35 of the *Sydney Water Act 1994* as well as the *Sydney Water Operating Licence 2000 – 2005*.

Under the *Protection of the Environment Administration Act 1991*, the Environment Protection Authority is established as the primary organisation responsible for protecting the environment of NSW. The Environment Protection Authority's regulatory role, on behalf of the environment and community, is reflected in the *Protection of the Environment Administration Act 1991* and *Protection of the Environment Operations Act 1997*, as well as in various other acts and regulations, which the organisation administers.

Sydney Water Corporation's responsibilities are for the provision of drinking water, and wastewater services and some stormwater services to Sydney, the Blue Mountains and the Illawarra communities. The Environment Protection Authority constitutes Sydney Water Corporation's environmental regulator in carrying out such activities. More specifically, under the *Protection of the Environment Operations Act 1997*, the Environment Protection Authority regulates those Sydney Water activities that are scheduled under this Act, and is the appropriate regulatory authority for Sydney Water's other activities. The twenty-seven licences for Sydney Water's sewage treatment systems are primary examples of such regulation. Furthermore, the importance of Sydney Water Corporation's broad environmental responsibilities, and the relationship between these and the requirements of the *Protection of the Environment Administration Act 1991*, is directly reflected in Sydney Water's principal and special objectives.

In addition to recognising the respective roles of the Environment Protection Authority and Sydney Water Corporation, this Memorandum of Understanding outlines co-operative structures and processes between the Environment Protection Authority and Sydney Water Corporation, including the Strategic Liaison Group and the Operational Policy Committee. These structures and processes allow for joint consideration of strategic, operational and regulatory issues as well as joint deliberation on progress and alignment of Sydney Water's commitments to ongoing environmental improvements with the EPA's broader environmental protection charter.

The Environment Protection Authority and Sydney Water Corporation will work co-operatively through the Strategic Liaison Group, the Operational Policy Committee and other mechanisms to achieve the objectives of both organisations. In doing so, the Environment Protection Authority expects Sydney Water Corporation to meet environmental requirements, and will regulate Sydney Water Corporation in a manner consistent with its regulation of other organisations.

1 Parties to this Memorandum

This Memorandum of Understanding (MOU) is entered into by the Sydney Water Corporation (Sydney Water) and the Environment Protection Authority (EPA), in conformance with section 35 of the *Sydney Water Act 1994*.

2 Functions and Objectives of the Parties

Sydney Water Corporation

2.1 Functions of Sydney Water

Subject to one or more types of operating licences, the principal functions of Sydney Water are, in its area of operations, to provide, construct, operate, manage or maintain systems or services for:

- a. storing or supplying water; or
- b. providing sewerage services; or
- c. providing stormwater drainage services; or
- d. disposing of wastewater.

Sydney Water may provide facilities or services that are necessary, ancillary or incidental to its principal functions, and conduct any business activity (whether or not related to its principal functions) that it considers will further its objectives. These objectives are described below.

2.2 Principal Objectives of Sydney Water

The equally important principal objectives of Sydney Water are:

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

2.3 Special Objectives of Sydney Water

In implementing its principal objectives, Sydney Water has the following special objectives:

- a. to reduce risks to human health; and
- b. to prevent the degradation of the environment.

These 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.

Environment Protection Authority

2.4 Functions of the EPA

Established in 1992 under the *Protection of the Environment Administration Act 1991*, the EPA works with business, industry, government and community organisations to achieve and maintain a healthy environment. In addition to its regulatory functions the EPA is active in environmental education, environmental economics, environmental research and monitoring, and regular reporting on the state of the environment of NSW.

2.5 Objectives of the EPA

The EPA has two main objectives:

- a. to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development; and
- b. to reduce the risks to human health and prevent the degradation of the environment.

The EPA legislation expands on the means by which these objectives can be reached, which include:

- i. promoting pollution prevention;
- ii. 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;
- iii. minimising the creation of waste by the use of appropriate technology;
- iv. regulating the transportation, collection, treatment, storage and disposal of waste;
- v. encouraging the reduction of the use of materials;
- vi. encouraging the reuse and recycling of materials;
- vii. encouraging material recovery;
- viii. adopting minimal environmental standards prescribed by complementary Commonwealth and State legislation, and advising the Government to prescribe more stringent standards;
- ix. where appropriate setting mandatory targets for environmental improvement;
- x. promoting community involvement in decisions about environmental matters;

- xi. ensuring the community has access to relevant information about hazardous substances arising from, stored, used or sold by any industry or public authority; and
- xii. conducting public education and awareness programs about environmental matters.

3 Principles

- 3.1 There is significant alignment of the principle and special objectives of Sydney Water and the objectives of the EPA, especially in regard to the principles of ecologically sustainable development, the prevention of environmental degradation, and the minimisation of human health risks. This alignment of objectives provides a strong basis for a co-operative relationship and shall be recognised through facilitation of the structures and processes established by this MOU.
- 3.2 The parties recognise the alignment of Sydney Water's and the EPA's objectives with Sydney Water's specific objectives and outcomes for environmental improvements as detailed in the current Environment Plan for Sydney Water. Liaison on issues associated with Sydney Water's commitments to environmental improvement will be facilitated through the structures and processes established by this MOU.
- 3.3 The parties shall recognise the important role of the community and of other stakeholders, especially the Sydney Catchment Authority and the Department of Health, in management of the urban water cycle in the catchments supplying water in Sydney Water's area of operations.
- 3.4 The parties shall recognise the need to apply innovation and full integration of water services in the pursuit of ecologically sustainable development. Interactions between the parties will be founded on the recognised need to maximise such opportunities for innovation and for a co-ordinated government approach to urban water cycle planning.

4 Term

- 4.1 This MOU commences on the date of endorsement by the respective parties and remains in force until amended or replaced.

5 Structures and Processes

5.1 Chief Executive Officer (CEO) Meetings

- 5.1.1 The CEO of Sydney Water and the CEO of the Environment Protection Authority, or respective deputies, shall meet to discuss matters of mutual concern and any matters referred by the Strategic Liaison Group or the Operational Policy Group.
- 5.1.2 CEO meetings will be on a regular basis but not less than once per financial year.
- 5.1.3 Either party shall initiate CEO meetings as required.

5.2 Strategic Liaison Group (SLG)

- 5.2.1 The EPA and Sydney Water will continue to operate the Strategic Liaison Group.
- 5.2.2 The role of the SLG will be to consider those issues determined by members of the group to be relevant, but may include:
- long-term joint strategic issues and policies arising from the functions of the parties given in sections 2.1 and 2.4 of this MOU, including future directions for water cycle management, sewage treatment system management and regulation;
 - the implications of the EPA's objectives for Sydney Water, as stated in section 2.5 of this MOU;
 - strategic issues of a scientific nature; and
 - areas for co-operative research and joint initiatives.
- 5.2.3 The SLG members shall report to their respective CEOs on significant issues that relate to the functions of the parties as detailed in 2.1 and 2.4 of this MOU.
- 5.2.4 The membership of the SLG will include CEOs and relevant members of their executive team. Specific membership will be as agreed between the parties from time to time. The chairperson of the SLG will rotate annually.
- 5.2.5 The SLG shall meet at least three (3) times per year. The SLG shall determine the specific frequency and procedure for calling meetings and the manner in which business is to be conducted at, and in relation to, those meetings.

5.3 Operational Policy Committee (OPC)

- 5.3.1 The EPA and Sydney Water will continue to operate the Operational Policy Committee.
- 5.3.2 The role of the OPC will be to consider those issues set by the strategic agenda of the SLG as well as issues determined by members of the group to be relevant. Issues considered may include:
- operational issues and regulatory issues;
 - issues relating to approaches to and progress of Sydney Water's commitments to environmental improvements;
 - unresolved matters of significance to Sydney Water's operations; and
 - requirements of the sewage treatment system (STS) licences.
- 5.3.3 The OPC members shall report to the SLG on significant issues that relate to the functions of the parties as detailed in 2.1 and 2.4 of this MOU.
- 5.3.4 The membership of the OPC will be as agreed between the parties from time to time.

- 5.3.5 The OPC shall meet at least four (4) times per year. The OPC shall determine the specific frequency and procedure for calling meetings and the manner in which business is to be conducted at, and in relation to, those meetings.
- 5.3.6 The OPC shall develop an annual work program to form the basis of OPC, and provide this to the SLG for endorsement following the first meeting for the financial year.

5.4 Joint Forums, Programs and Initiatives

- 5.4.1 Joint forums will be convened where appropriate with the Sydney Catchment Authority and other stakeholders on issues relevant to supplying water in Sydney Water's area of operations and sewerage and stormwater services.
- 5.4.2 Sydney Water and the EPA will consider developing joint programs and initiatives and undertaking research to meet the stated objectives of both organisations that are party to this MOU, as detailed in sections 2.2, 2.3 and 2.5 of this MOU.

5.5 Exchange of Information and Data

- 5.5.1 In recognition of the spirit of co-operation embodied in this MOU and to enable both parties to more effectively carry out their statutory functions given in 2.1 and 2.4 of this MOU, each party will share or supply relevant data and information and provide updated information where necessary. This agreement should not constrain the regulatory responsibilities of the EPA.
- 5.5.2 Data and information shared or supplied openly and honestly by the parties under this MOU shall be on such terms as agreed between the parties. The intention is to avoid either party being 'blindsided', that is where relevant information is not made available.

6 Dispute Resolution

- 6.1 Any difference or dispute that arises between the parties under this MOU will be addressed at the lowest management level possible. Either party will refer issues that cannot be resolved at a local level to more senior officers or the SLG for consideration and resolution.
- 6.2 The SLG will strive to resolve all disputes, but should there be unresolved issues, these will be referred to the CEOs of the two parties.


7 Amendments to this MOU

- 7.1 Upon either party to this MOU giving notice to the other of its desire to see the MOU reviewed, amended or replaced, this MOU must be reviewed, and amended or replaced accordingly.
- 7.2 Both parties must agree to the timeframe for any process of review, amendment or replacement of this MOU at the commencement of that process.
- 7.3 Any amendment to or replacement of this MOU shall be exhibited in accordance with the requirements of section 36 of the Sydney Water Act 1994.

Sydney Water-EPA Memorandum of Understanding

This Memorandum of Understanding is made between the Environment Protection Authority and the Sydney Water Corporation on the 16 day of October 2002.

SIGNED for and on behalf of the Environment Protection Authority


.....

Lisa Corbyn, Director General


.....

Witness to the above signature

Sonya Pike
.....

(Print name)

EPA
59-61 GOULBURN ST.
.....

SYDNEY NSW 2000
.....

(Address)

SIGNED for and on behalf of the Sydney Water Corporation


.....

Alex Walker, Managing Director

J. North
.....

Witness to the above signature

JENNIFER NORTH
.....

(Print name)

Sydney Water Corporation
.....

115-123 Bathurst St. Sydney
.....

(Address)

Memorandum of Understanding

Between **Sydney Water Corporation** and

The Water Administration Ministerial Corporation

(NSW Department of Land and Water Conservation)

June 2002

ISBN 0 7347 5255 5

Published by the NSW Department of Land and Water Conservation

Sydney July 2002

Introduction

In accordance with the requirements of *Sydney Water Operating Licence 2000 - 2005*, the purpose of this MOU is to form the basis for co-operative relations between the Water Administration Ministerial Corporation and Sydney Water Corporation.

Under the *Water Act 1912*, the *Sydney Water Act 1994* and the *Water Management Act 2000* the Ministerial Corporation (through the Department of Land and Water Conservation) has certain powers to regulate Sydney Water's operations. These include water extraction (including drought management), operation of works, activities on waterfront land, and water use (including demand management).

Section 372(3) of the *Water Management Act 2000* provides that the Ministerial Corporation may exercise any of its functions, and otherwise act, in the name of the Department of Land and Water Conservation.

Sydney Water is, therefore, a major stakeholder in the exercise of the Department's functions in the catchments supplying water to Sydney Water and in Sydney Water's area of operations. Specific Sydney Water facilities include North Richmond Filtration Plant, Manly Dam and the Botany Wetlands.

The MOU outlines a framework for achieving a co-operative relationship between the Department of Land and Water Conservation as the Ministerial Corporation's manager of water sources for the State of New South Wales, and Sydney Water as the supplier of water, stormwater and sewerage services to the people of Sydney, Illawarra and the Blue Mountains.

The MOU also recognises the relevance of the objectives of the Sydney Catchment Authority to the successful achievement of the functions and objectives of the parties in much of the Hawkesbury-Nepean catchment. The Authority's objectives are to ensure that the catchment areas and catchment infrastructure works are managed and protected so as to promote water quality, the protection of public health and public safety, and protection of the environment. The Authority is also obliged to manage its infrastructure works efficiently and economically, and in accordance with sound commercial principles and in conformity with the principles of ecologically sustainable development. In complying with its objectives, the Authority must comply with its Act, its Operating Licence and its water management licence.

1. Parties to the Memorandum

This Memorandum of Understanding (MOU) is entered into by the Sydney Water Corporation (Sydney Water) and the Water Administration Ministerial Corporation under Section 35 of the *Sydney Water Act 1994*.

2. Functions and Objectives

Sydney Water

2.1 Functions of Sydney Water

Subject to one or more operating licences, the principal functions of Sydney Water are, in the area of operations, to provide, construct, operate, manage or maintain systems or services for:

- (a) storing or supplying water, or
- (b) providing sewerage services, or
- (c) providing stormwater drainage services, or

- (d) disposing of waste water.

Sydney Water may provide facilities or services that are necessary, ancillary or incidental to its principal functions, and conduct any business activity (whether or not related to its principal functions) that it considers will further its objectives.

2.2 Principal Objectives of Sydney Water

The equally important principal objectives of Sydney Water are:

- (a) to be a successful business and, to this end:
 - (i) to operate at least as efficiently as any comparable businesses;
 - (ii) to maximise the net worth of the of the state's investment in Sydney Water;
 - (iii) to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates; and
- (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 any operating licence.

2.3 Special Objectives of Sydney Water

In implementing the principal objectives set out in section 21 of the *Sydney Water Act 1994*, Sydney Water has the following special objectives:

- (a) to reduce risks to human health,
- (b) to prevent the degradation of the environment

Those 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.

Department of Land and Water Conservation

2.4 Functions of the Department

The Department has the following functions:

- (a) developing and implementing policies on natural resource management and use;
- (b) managing the planning and sharing of water across the State, including demand management and drought management;
- (c) maintaining databases on the condition of the State's land, soil, water, coasts and vegetation;
- (d) managing assets such as Crown lands, dams and fishing ports;
- (e) providing expertise and financial support to local councils and communities for the management of the coast, estuaries, flood risk, soils and vegetation; and
- (f) managing the Country Towns Water Supply and Sewerage Program.

2.5 Objects of the Department

The objects of the Department are generally to provide for the sustainable and integrated management of the water sources, crown land and native vegetation of the state for the benefit of both present and future generations and, in particular:

- (a) to apply the principles of ecologically sustainable development;
- (b) to protect, enhance and restore water sources and native vegetation, their associated ecosystems, ecological processes and biological diversity;
- (c) to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, the proper development and conservation of Crown land, and the conservation and management of native vegetation;
- (d) to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources, Crown land and native vegetation; and
- (e) to integrate the management of water sources, Crown land and native vegetation with the management of other aspects of the environment, including the built environment, soil and native fauna.

3. Principles

- 3.1 The significant overlap between the principal and special objectives of Sydney Water and the objects of the Department should be recognised, especially in regard to the principles of ecologically sustainable development as these relate to urban water use and sustainable management of an integrated urban water cycle.
- 3.2 The parties will recognise the role of the community and of other stakeholders, especially the Sydney Catchment Authority, the Environment Protection Authority and the Department of Health in management of the urban water cycle in the catchments supplying water to Sydney Water and in Sydney Water's area of operations.
- 3.3 All agreements entered into between Sydney Water and the Department will be in the public domain.

4. Term

- 4.1 This MOU commences on the date of endorsement by the respective parties and remains in force until amended or replaced.
- 4.2 This MOU must be reviewed, and amended or replaced upon either party to this MOU giving notice to the other of its desire to see the MOU reviewed, replaced or amended.
- 4.3 The process to review, and amend or replace this MOU must be undertaken within a timeframe agreed to by both parties at the commencement of that process. Any amendments to this MOU shall be exhibited in accordance with the requirements of Division 3 of the *Sydney Water Act 1994*

5. Structures and Processes

5.1 Chief Executive Officer (CEO) Meetings

- 5.1.1 The CEO of Sydney Water, or a deputy, and the CEO of the Department of Land and Water Conservation, or a deputy, shall meet to discuss matters of mutual concern and any matters referred by the Strategic Liaison Group. This will be on a regular basis but not less than once per financial year
- 5.1.2 CEO meetings may be initiated by either party as required.

5.2 Strategic Liaison Group (SLG)

- 5.2.1 The Department and Sydney Water will, as soon as practicable after the execution of this MOU, establish a Strategic Liaison Group.
- 5.2.2 The role of the SLG will be to consider those issues determined by members of the group to be relevant, but may include:
- long-term strategic issues and policies arising from the functions of the parties given in 2.1 and 2.4 above; including access licensing, the location and operation of works, and activity and use approvals;
 - issues arising from operation of catchment management boards and other natural resources management committees in the area of operations of Sydney Water;
 - the implications of the objects of DLWC in 2.5 above for Sydney Water; including water quality, effluent management, salinity, groundwater management, wetlands, and aquatic biodiversity; and
 - areas for co-operative research and joint initiatives.
- 5.2.3 The SLG members shall report to their respective CEOs on significant issues that relate to the functions of the parties given in 2.1 and 2.4 above.
- 5.2.4 The membership of the SLG will be as agreed between the parties from time to time.
- 5.2.5 The SLG shall determine the frequency and procedure for calling meetings and the manner in which business is to be conducted at those meetings.

5.3 Joint forums

- 5.3.1 Joint forums will be convened where appropriate with other authorities, agencies or peak community groups on issues relevant to integrated urban water cycle management in the catchments in Sydney Water's area of operations.

5.4. Exchange of Information and Data

- 5.4.1 In recognition of the spirit of co-operation embodied in this MOU and to enable both parties to more effectively carry out their statutory functions given in 2.1 and 2.4 above, each party must share or supply relevant data and information and provide updated information where necessary.
- 5.4.2 Data and information shared or supplied by the parties under this MOU shall be on such terms as agreed between the parties.

5.5. Joint Programmes And Initiatives

- 5.5.1 Sydney Water and the Department will consider developing joint programmes and initiatives and undertaking research to meet the principal and special objectives of Sydney Water given in 2.2 and 2.3 above and the objects of the Department given in 2.5 above.

6. Dispute Resolution

- 6.1 Any difference or dispute which arises between the parties under this MOU will be addressed at the lowest management level possible. Issues that cannot be resolved at a local level will be referred by either party to the SLG for consideration and resolution.
- 6.2 The SLG will strive to resolve all disputes, but should there be unresolved issues, these will be referred to the Chief Executive Officers of the two parties.
- 6.3 Ultimate arbitration will be by relevant Ministers.

This Memorandum of Understanding is made between the Water Administration Ministerial Corporation and the Sydney Water Corporation on the 28th day of ~~May~~ June 2002.

SIGNED for and on behalf of the **Water Administration Ministerial Corporation**
Bob Smith, Director-General, Department of Land and Water Conservation

Bob Smith

Witness to the above signature

P. Lynch JP

(signature)

Brendley Lynch

(name)

9-23-33 BRIDGE ST

Sydney 2000

(address)

SIGNED for and on behalf of the Sydney Water Corporation
Alex Walker, Managing Director

Alex Walker

Witness to the above signature

J. North

(signature)

JENNIFER NORTH

(name)

Sydney Water

(address)

MEMORANDUM OF UNDERSTANDING BETWEEN

NSW HEALTH AND SYDNEY WATER CORPORATION

***Memorandum of Understanding between
NSW Health and Sydney Water Corporation***

NSW HEALTH DEPARTMENT

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March 2001

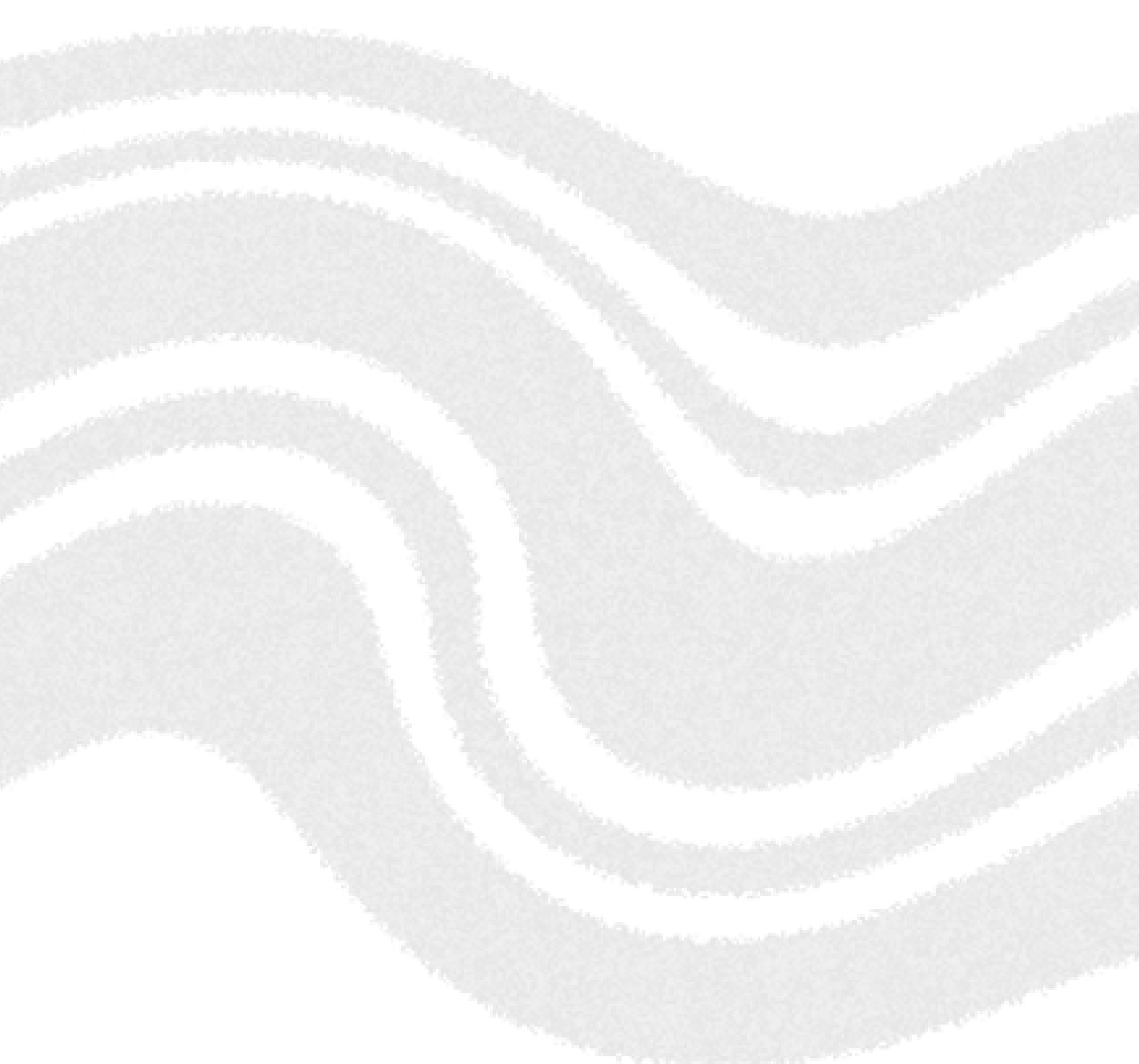
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Introduction

This is the Memorandum of Understanding (MOU) which was executed by the NSW Health Department and the Sydney Water Corporation on 11 November 1997, incorporating the amendments made to that MOU by agreement between those agencies signed 21 November 2000.



Memorandum of understanding

Memorandum of Understanding between the NSW Health Department (the Department) of the one part and the Sydney Water Corporation (the Corporation) of the other part.

This Memorandum was entered into on the 21 day of November 1997, and incorporates amendments made to that MOU by agreement between the NSW Health Department and the Sydney Water Corporation dated 21 November 2000.

Context

- A.** The Corporation is a statutory state owned corporation (SOC) under the *State Owned Corporations Act 1989*. The Corporation has a responsibility to supply safe drinking water to its customers in accordance with its Operating Licence granted under the *Sydney Water Act 1994*.
- B.** The Department has a role in providing advice to the Government on standards in relation to drinking water quality and to commit the Corporation to supplying water which is safe to drink having regard to public health.
- C.** The Minister for Health and the Director-General of the Department have certain responsibilities in relation to the protection of public health under the *Public Health Act 1991* and other relevant legislation. The Department's roles and responsibilities as outlined in this Memorandum are in addition to any functions conferred upon the Department, the Director-General of the Department, the Chief Health Officer of the Department or the Minister for Health under the *Public Health Act 1991*.

- D.** The objective of this Memorandum is to formally set out the terms of a cooperative relationship between the parties, establish their respective roles, facilitate fulfilment of each party's function in relation to the protection of public health, and to fulfil the requirements of section 35 of the *Act* and the Corporation's Operating Licence.
- E.** It is recognised that the Independent Pricing and Regulatory Tribunal has a role as the Operating Licence regulator for Sydney Water and in setting the Corporation's prices for services which takes into account community preferences including their willingness to pay or accept risk.

1. Interpretation

- 1.1 Unless otherwise specified, terms in this Memorandum shall have the same meaning as provided by the *Act* or the Operating Licence.
- 1.2 '*Act*' means the *Sydney Water Act 1994*.
- 1.3 'Water supply system' includes all the infrastructure, from the Sydney Catchment Authority's delivery point to the Corporation to the consumer's point of connection and utilised by the Corporation to supply drinking water in the Licence Area.
- 1.4 'Guideline exceedances' means water quality monitoring results which exceed the *NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996*.
- 1.5 'Significant and major incidents' means those incidents which are required to be reported to the Department through the Corporation's incident management plans.
- 1.6 Headings and numbering are for convenience only and do not affect the interpretation of this Memorandum.

2. Regulatory agency

- 2.1 The Director-General of the Department is specified as a 'regulatory agency' under section 34 of the *Act*. The *Corporation's Act* and Operating Licence requires it to enter into a Memorandum of Understanding with the Department. For clarification, it is agreed that the Department will fulfil the Director-General's responsibilities under the *Act* and the Department shall act as the regulatory agency in accordance with this Memorandum.
- 2.2 The Department's public water supply regulatory program will consist of the requirements contained within this MOU.

3. Term

- 3.1 The term of this Memorandum shall be for the period commencing on the date of execution hereof and remaining in force for the term of the Corporation's Operating Licence.

4. Liaison between the Corporation and the Department

- 4.1 A Strategic Liaison Group consisting of the Director-General of the Department and the Managing Director of the Corporation and senior officers nominated by them shall meet regularly to discuss the broad principles, directions and policies underlying the roles and responsibilities of the parties under this Memorandum and to:
 - annually review progress on the implementation of this Memorandum.
 - consider long term strategic issues and policies and to define and implement processes for the interchange of strategic planning information.
- 4.2 A Joint Operational Group shall meet regularly to:
 - coordinate implementation of this Memorandum.
 - establish data sharing programs.
 - establish programs of investigations, feasibility studies and economic analyses to be undertaken by the Corporation to meet changing public health objectives in relation to drinking water.
 - make recommendations to the Strategic Liaison Group regarding the updating of this Memorandum.
 - facilitate coordination of the collection of data on water quality for use by all relevant agencies.

The Joint Operational Group may establish ad hoc joint working parties to investigate and formulate recommendations on specific and technical issues, as required.

- 4.3 The Membership of the Joint Operational Group (unless otherwise agreed between the parties) will be as follows:

Corporation

- Regulatory management representative
- Water quality management representative
- Water operational management representative
- Corporate representative

Department

- Manager, Water Unit
- Policy Advisers, Water Unit

The Corporation and Department may invite other officers to attend in support of specific issues.

5. Dispute resolution

- 5.1** Where a dispute between the parties cannot be resolved by the Joint Operational Group, or the Strategic Liaison Group, then it should be referred to the Chief Executive Officers for resolution. In the event that the dispute cannot be resolved by the Chief Executive Officers, the view of the Department shall prevail.

6. Amendment

- 6.1** This Memorandum can be amended at any time upon agreement between the parties and in accordance with section 36 of the *Act*. Where agreement is not reached, the view of the Department is to prevail in accordance with section 35(3) of the *Act*.
- 6.2** Where the Corporation's Operating Licence is amended and the effect of the amendment is to create a conflict between the Licence and the Memorandum, then the parties shall meet to discuss the implications of the amendment and steps that can be taken by the Corporation to resolve any public health issues that may arise.

7. Corporation's roles and responsibilities

- 7.1** The Corporation shall ensure that all drinking water it supplies is safe to drink having regard to the health of the public and that it is supplied in accordance with its Operating Licence.
- 7.2** The Corporation's Operating Licence requires it to comply with the following relating to drinking water:
- (a) the *NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996* ('1996 Guidelines') relating to health guideline values
 - (b) any amendments, updates or supplements of the *1996 Guidelines* ('updated Guidelines') relating to health guideline values specified by NSW Health

- (c) the aesthetic guideline values of the *1996 Guidelines* specified by the NSW Minister for Health following consultation with the Minister responsible for the Corporation
- (d) the aesthetic guideline values of any updated Guidelines specified by the NSW Minister for Health following consultation with the Minister responsible for the Corporation.

- 7.2.2** The Corporation's Operating Licence requires that other grades of water supplied by Sydney Water must be supplied according to relevant guidelines and requirements prescribed by EPA, NSW Health, the Department of Land and Water Conservation, the Department of Agriculture, other relevant government agencies and the NSW Recycled Water Coordination Committee.

- 7.2.3** Sydney Water is to have regard to the concepts of risk minimisation practices and system management of public water supplies referred to in the *1996 Guidelines* and any updated Guidelines, when conducting its water supply system activities.

- 7.3** The Corporation shall establish and use an internal complaints handling procedure for receiving, responding to, investigating and resolving customer complaints regarding water quality.

- 7.4** The Corporation shall consult with the Department in relation to planning issues that arise from changes in the *NHMRC and ARMCANZ Australian Drinking Water Guidelines* from time to time.

- 7.5** The Corporation shall prepare, to the satisfaction of the Department, a comprehensive Annual Drinking Water Quality Monitoring Plan for the water supply system by 31 March each year. The Corporation shall submit this Plan to the Department for review and approval no later than 31st January each year. The Department shall determine its approval no later than 28th February each year. The monitoring plan shall:

- a) include the health and aesthetic parameters for which compliance is required under clause 7.2 of this MOU.

- b) monitor drinking water quality for the aesthetic parameters as required in clause 7.2 of this MOU.
- c) be based on a statistically valid sampling program which meets the intent of the *1996 Guidelines* and any updated Guidelines.
- d) include monitoring locations such that the sampling results are representative of water supplied to Customers and Consumers.
- e) require that samples be tested in accordance with the testing requirements of the 20th edition of *Standard Methods for the Examination of Water and Wastewater* published by the American Public Health Association or other established methods as appropriate.

The Corporation shall carry out a monitoring program in accordance with the monitoring plan. Initially, the Corporation must undertake drinking water quality monitoring for the period 1 January 2000 to 30 June 2001 and after that for each subsequent financial year.

- 7.6** The Corporation shall maintain an effective system of quality assurance for monitoring, sampling, testing, reporting and other processes in relation to the water supply system in consultation with the Department.
- 7.7** The Corporation shall submit to the Department:
- a) on a quarterly basis, monitoring results as agreed in the monitoring plan together with an evaluation of the results on an exception basis.
 - b) on a financial-year basis and by 30 November each year:
 - the results of the health and aesthetic parameters for which compliance is required under clause 7.2 of this MOU.
 - the results of the aesthetic guideline values of the *1996 Guidelines* that apply to the physical characteristics of drinking water.
 - the results should be accompanied by the Corporation's analysis of conditions relevant to the interpretation of data or system descriptions indicating potential health-related problems, together with an evaluation of the results on an exception basis.

- a summary of monitoring information (including guideline exceedances), indicating water quality trends and problems, and a summary of significant and major water quality incidents required to be reported to the Department through the Corporation's Drinking Water Quality Incident Management Plan provided under 10.3. The summary is to include action taken to resolve those exceedances with the potential to impact on public health, and information as to how public health was protected during those exceedances.

- c) the fourth quarterly report required in 7.7(a) can be included as a part of the annual report provided under 7.7(b).
- d) by 31 March in each year, unless otherwise specified following the Mid-term review of Sydney Water's Operating Licence, the Corporation must prepare, to the satisfaction of the Department, an Annual Water Quality Improvement Plan for the water supply system. This Plan is to incorporate system and operational changes needed to address problems identified through water quality monitoring data and through periodic system inspections and evaluations.

- 7.8** The Corporation will develop a system to provide on line access to test results for regulatory agencies during incidents.
- 7.9** The Corporation or its authorised agent shall fluoridate all drinking water supplies as required by the *Fluoridation of Public Water Supplies Act 1957*. Fluoride shall be sampled and reported in accordance with the requirements of the *Fluoridation of Public Water Supplies Act 1957*.
- 7.10** The Corporation shall review with the Department its strategies for the comprehensive management of public health issues no less frequently than every five years, or whenever changes occur that substantially alter the basis of the existing strategies. Strategies to be submitted for review include:
- a) The Five-Year Drinking Water Quality Management Plan
 - b) The 20 year Water Strategy
 - c) Wastewater disposal and reuse strategy.

7.11 The Corporation shall provide the Department with all data and all information on the planning, design, maintenance, operation and administration of the Corporation's activities that the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.

7.12 The Corporation's responsibilities under this Memorandum apply to the whole of the Corporation's operations (including the whole of its water supply system), including those operations which are performed on behalf of the Corporation by a third party. Protocols are to be established between the Corporation and third parties to ensure the effective operation of the requirements of this Memorandum of Understanding. Such protocols are to include, but not be limited to, joint procedures and training for the identification and notification of information and events of public health significance and the responses described in Clause 10.

7.13 The Corporation shall allow officers of the Department to enter any premises under its care and control, including facilities performing water supply, wastewater reticulation, treatment and disposal systems and wastewater reclamation and reuse systems for the purposes of carrying out any inspections or viewing any records which the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.

7.14 The Corporation, as a service provider, has a role in ensuring public health protection. This role must be recognised in any conflict or matters of mutual concern to both public health and environmental protection approaches, and will require consultation between the Corporation, the NSW Environment Protection Authority and the Department. The Corporation must meet the environmental water quality requirements for any discharges or water releases required by licences issued to it by the EPA or the Department of Land and Water Conservation.

8. Department's role and responsibilities

8.1 The Department shall provide advice to the Corporation on matters regarding the supply of water which is safe to drink and on other public health issues in regard to water which relate to the Corporation's activities.

8.2 The Department shall provide advice to the Corporation on wastewater management activities that impact on public health, where appropriate.

8.3 The Department shall make independent judgements on public health matters related to the Corporation's activities and exercising its powers and functions under the *Public Health Act 1991*.

8.4 Where any drinking water supplied by the Corporation is failing to meet the Drinking Water Guidelines which the Corporation is required by clause 7.2 to meet, or where the provision of drinking water, or the reclamation, reuse, disposal, or treatment of wastewater takes place in such a manner that a hazard to public health may arise, the Corporation shall be responsible for assessing the problem and proposing rectification action. If the Department is of the opinion that it is appropriate to do so, it may provide advice on rectification action that may be taken by the Corporation. Where the Department gives any advice to the Corporation under this clause, it shall be entirely the responsibility of the Corporation to take appropriate rectification action to ensure that: the drinking water it supplies is safe to drink and meets the requirements of the Corporation's Operating Licence and clause 7.2 and that other activities are conducted in a manner that do not pose a potential hazard to public health. For the purposes of this exercise, the Department will use the *1996 Guidelines* or any updated Guidelines in providing such advice in relation to drinking water.

- 8.5** The Department shall report to IPART upon the Corporation's compliance with the provisions of this Memorandum and upon any public health matters related to the Corporation's operations, as required by IPART or as considered appropriate by the Department, to enable IPART to carry out its functions under the *Act*.

9. Emerging public health issues related to water

- 9.1** The parties shall cooperatively exchange information and the Corporation shall participate in appropriate research and development on emerging public health issues related to drinking water so as to enable them to make well informed judgements regarding action to be taken in relation to the Corporation's water supply system to maintain the protection of public health.
- 9.2** The parties shall independently provide input to public discussion and debate on future revisions of the *1996 Australian Drinking Water Guidelines*, and on guidelines for other grades of water.

10. Events of public health significance

- 10.1** The Corporation shall immediately report to the Department any information or event within its drinking water supply system, or within its wastewater reclamation and reuse and wastewater reticulation, treatment and disposal operations which may have significant implications for public health.
- 10.2** The report of information by the Corporation will include maps depicting geographical locations and systems in addition to tables or text if required by the Department.
- 10.3** The Corporation shall, in consultation with the Department and other Government agencies where appropriate, maintain and update the Corporation's Drinking Water Quality Incident Management Plan.

- 10.4** The Corporation shall, in consultation with the Department and other Government agencies where appropriate, develop and deploy incident management plans/protocols covering the Corporation's activities relating to waste water management.

- 10.5** The parties shall nominate a 24 hour incident management contact point for the coordination of responses to any event of public health significance. That contact point will be an officer of each organisation who has been trained in the plans and incident management procedures and protocols thereunder. The incident management plans shall contain or incorporate by reference, procedures and protocols for the coordinated management of incidents including media and stakeholder liaison and any notification of public health advice from the Department.

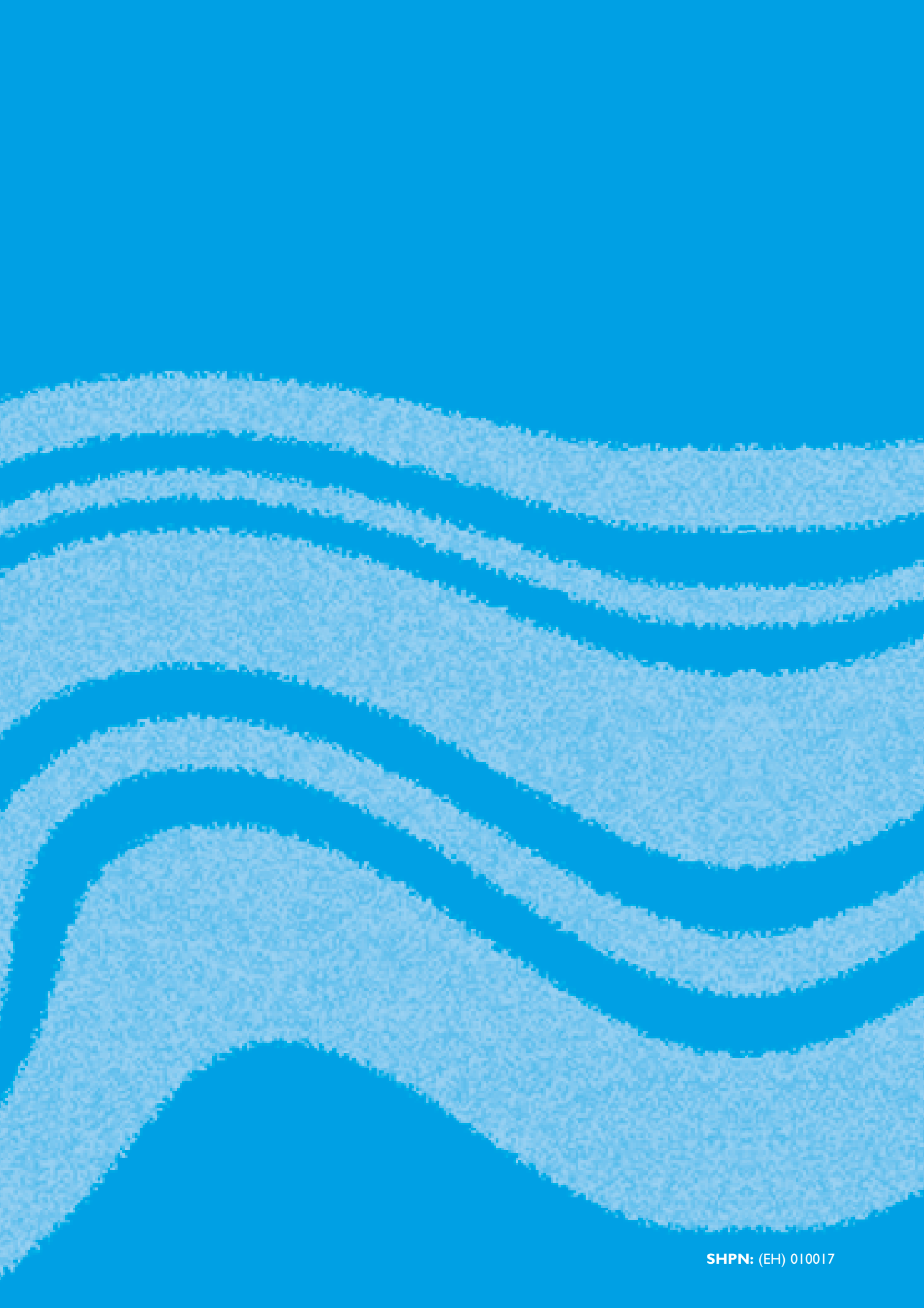
- 10.6** The parties shall ensure that all relevant personnel in their respective organisations are trained to respond to and execute the incident management plans and that appropriate training exercises are jointly developed and conducted.

11. Data exchange

- 11.1** The Department will provide the Corporation with reports and studies it undertakes which are relevant to those activities of the Corporation which impact on public health.
- 11.2** The Corporation will provide reports and studies undertaken by the Corporation as part of its business which are relevant to public health.

12. Public education and information

- 12.1** The Department and the Corporation shall jointly undertake a public education program relating to the health aspects of drinking water.
- 12.2** The Corporation shall report to the public in accordance with section 6.4 of its Operating Licence.





Appendix F

Memoranda of Understanding Compliance Tables



Table F-1 MOU - Department of Environment and Conservation Implementation

Clause	Requirement	Comment
"Introduction"	The current Sydney Water – DEC MOU was executed on 16 October 2002 to provide a foundation for <i>"cooperative relationships"</i> between the organisations. The "Introduction" sets out the environmental protection and legislative roles of the EPA, including its regulatory and licensing role of Sydney Water. It outlines the structures and process for this cooperation (viz: Strategic Liaison Group and Operational Policy Committee) and Sydney Water commitment to ongoing environmental improvements. It includes Sydney Water's role in the provision of drinking water, wastewater and some stormwater services.	Over 2005/06 the existing (2002) MOU does not reflect the current roles and responsibilities of DEC, which now incorporates the EPA. Note: a new SWC-DEC MOU was signed on 30 June 2006, that is the last day of the 2005/06 audit year. Thus, for the purpose of assessing the 2005/06 MOU "implementation", the existing (2002) MOU has been used.
1. Parties to this Memorandum	The Memorandum is in conformance with Section 35 of the <i>Sydney Water Act 1994</i>	No requirement. The MOU carries the signatures of the then Director General of EPA and the then Managing Director of Sydney Water, as well as witnesses, and is dated 16 October 2002. The MOU needs to be updated to reflect the current roles and composition of DEC.
2. Functions and Objectives of the Parties		
2.1. Functions of Sydney Water.	Relating to the supply of water, sewerage, and storm water drainage services as well as the disposal of wastewater.	No requirement.
2.2. Principal Objectives of Sydney Water	Principle objectives of Sydney Water being: » To be a successful business; » To protect the environment; and » To protect public health by supplying safe drinking water.	No requirement.



Table F-1 MOU - Department of Environment and Conservation Implementation

Clause	Requirement	Comment
2.3. Special Objectives of Sydney Water	Special Objectives of Sydney Water being to: » To reduce the risk to human health; and » Prevent degradation of the environment.	No requirement.
2.4. Functions of the DEC	Functions of the DEC are to <i>work with business, industry, government and community organisations to achieve and maintain a healthy environment.</i>	No requirement.
2.5. Objectives of the DEC.	Objectives of the DEC: » <i>to protect, restore and enhance the quality of the environment in NSW in regard to the needs to maintain ecologically sustainable development; and</i> » <i>to reduce the risk to human health and the degradation of the environment.</i>	No requirement.
3. Principles	This section acknowledges a “significant alignment” in the objectives between the DEC and Sydney Water, which provides a strong basis for a cooperative relationship. This relationship is reflected in the “Environment Plan” for Sydney Water and the MOU will assist in facilitating environmental improvement. Further, the parties recognised the role of alternate stakeholders and the need to apply innovation and full integration of water services.	No requirement. Needs to be updated to reflect the role of DEC and the status of the “ <i>current Environment Plan</i> ” and “... <i>the important role...especially the Sydney Catchment Authority...</i> ”
4. Term	MOU is to run from the date of commencement and remain in force until amended or replaced.	A new MOU with DEC was signed on 30 June 2006.



Table F-1 MOU - Department of Environment and Conservation Implementation

Clause	Requirement	Comment
5. Structures and Processes		
5.1. Chief Executive Officer (CEO) Meetings.	Chief Executive Officer (CEO) Meetings will take place on a regular basis not less than once per financial year and may be initiated by either party.	<p>No formal CEO meetings were held under the MOU over 2005/06. Advice was received that general discussions at CEO level had occurred, including that relating to agreement on a Wet Weather Overflow Abatement program.</p> <p>No issues from SLG or OPC (see Clauses 5.2 and 5.3, below) were elevated for CEO resolution over the year.</p>
5.2. Strategic Liaison Group (SLG).	Strategic Liaison Group (SLG) is to consider issues particularly in regard to long-term strategic issues and policy, implementation of DEC's objectives for Sydney Water, strategic issues of a scientific nature and areas for cooperative research and joint ventures.	<p>The SLG met on two (2) occasions being 07/12/2005 and 28/03/2006 being half the number the previous year and that required under the MOU. Membership includes the CEOs although neither CEO attended the meetings.</p> <p>A review of the SLG minutes indicated the SLG was focused on:</p> <ul style="list-style-type: none"> » Overflow Abatement Program, (including the DEC Licences under the Program); » The Environmental Monitoring Program; » The Operational Policy Committee's work program for 2006; and » A new MOU.



Table F-1 MOU - Department of Environment and Conservation Implementation

Clause	Requirement	Comment
5.3. Operational Policy Committee (OPC).	<p>Operational Policy Committee (OPC) will continue to consider issues set by the strategic agenda of the SLG including:</p> <ul style="list-style-type: none"> » Operational and Regulatory issues; » Sydney Water's commitment to environmental improvement; » Unresolved Sydney Water operation matters; and » Requirement of the sewerage treatment system licence. <p>OPC reports to the SLG, has an agreed membership, meets at least 4 times per year and is driven by an "annual work program".</p>	<p>Requirement not implemented. The OPC met on 3 occasions (4 are specified in MOU) being: 25 October 2005, 24 February and 8 June 2006.</p> <p>Copies of a selection of OPC meeting minutes were reviewed and the main OPC matters addressed included:</p> <ul style="list-style-type: none"> » Wet Weather Overflow Abatement Program; » Sydney Water's performance against its DEC Licences; and » Sydney Water's Capital Work Program.
5.4. Joint Forums	<p>Joint forums would be convened by SCA or other stakeholders and Sydney Water and DEC would consider developing joint programs and initiatives in regard to research of the respective organisations.</p>	<p>A joint forum, being a National Parks Working Group, was established to address land management impacts (for example, Sydney Water's pipeline access and maintenance program impacts).</p>
5.5. Exchange of Information and Data	<p>DEC and Sydney Water would share or supply relevant data or information in regard to their statutory functions though this exchange should not constrain the regulatory responsibility of DEC. Further, data and information should be on such basis agreed by the parties to ensure an open and honest exchange of information.</p>	<p>A range of information exchange took place between DEC and Sydney Water. The following items illustrate the implementation of this clause:</p> <ul style="list-style-type: none"> » Data relating to the Sewage Treatment Licences; and » Threatened species data.



Table F-1 MOU - Department of Environment and Conservation Implementation

Clause	Requirement	Comment
6. Dispute Resolution	Any disputes arising between the parties be addressed at the lowest management level and referred to more senior officers for consideration and resolution. Further matters unresolved at the SLG would be referred to the CEOs of the two parties.	One matter was referred to the SLG, for consideration and resolution, being the monitoring program for Chlorophyll A in estuaries.
7. Amendment of the MOU	Is available by giving notice of the need to review amend or replace the MOU, gaining an agreement to the timeframes for any process of review or amendment and finally any amendment or replacement should be exhibited in accordance with Section 36 of the Sydney Water Act 1994.	Over 2005/06 a new MOU was drafted, reviewed and exhibited in accordance with the requirements of the MOU. The exhibition was advertised on 24 February 2006 (Sydney Morning Herald) and a 28-day exhibition period conducted. No submissions were received as a consequence of the exhibition.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
Introduction	This section sets out the execution of the MOU.	No Requirement. Note: An amended MOU was agreed between the agencies during the Audit year (viz. 15 February 2006).
Memorandum of Understanding	This section identifies who the MOU is between and execution details	No Requirement. Note: The amendments include references to update water quality guidelines, changes to Corporation representatives, inclusion of fluoridation operations and removal of risk minimisation as referred to in earlier guidelines.
Context	This section outlines the particular responsibilities of the Department of Health, the Director General of Health, the Sydney Water Corporation, the role of IPART and establishes the objective of the memorandum, (viz: to formally set out the terms for a cooperative relationship between the parties, establish the roles, facilitate fulfilment of each party's functions in relation to the protection of public health and fulfil the requirements of Section 35 of the Act and the Corporation's Operating Licence).	No requirement.
1	Interpretation, which sets out the meanings of specific terms under the Act or Operating Licence.	No requirement.
2	The Director General of the Department is specified as a regulatory agency.	The Water Legislation Amendment (Drinking Water and Corporate Structure) Act 1998 amended the <i>Sydney Water Act</i> and the Health Act to effectively strengthen and clarify NSW Health's powers concerning the safety of drinking water and established Sydney Water as a Statutory State Owned Corporation.
3.1	The term of this MOU will be from the date of execution (viz: 15 February, 2006) and remain in force for the term of the Operating Licence.	Performance requirement was implemented. The amended MOU was signed by Sydney Water and NSW Health on 15 February 2006 and, unless further amended or replaced, will continue until 2010.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
4.1	<p>A Strategic Liaison Group shall meet to discuss broad principles of directions and policy underlying the roles and responsibilities of the party and to:</p> <ul style="list-style-type: none"> » Annually review progress on the implementation of this Memorandum; and » Consider long-term strategic issues and policies in defined implemented processes for the interchange of strategic planning information. 	<p>Performance requirement was implemented.</p> <p>SLG met 4 times in the audit period: 25 August 2005; 18 November 2005; 10 March 2006; and 15 June 2006. Meeting minutes were sighted.</p> <p>SLG endorsed a Strategic Work Plan to address key issues. The SLG is providing an active forum to achieve the objective of the MOU, including those of catchment management through the participation of SCA. For example, the reuse of water and implementation of water quality guidelines, including risk management aspects.</p> <p>It is noted from SLG Minutes that SCA are a very active member of the SLG and would appear, in many regards, to be an equal partner in implementing the MOU</p> <p>An annual review on the implementation of the MOU was undertaken by JOG and referred to SLG.</p>
4.2	<p>A Joint Operational Group (JOG) shall meet regularly to discuss implementation of MOU, information and data sharing programs, feasibility studies and economic analyses, make recommendations to the SLG and facilitate coordination of water quality data. Joint working groups can be established.</p>	<p>Performance requirement was implemented.</p> <p>JOG met 5 times in the audit period: 25 July 2005; 17 October 2005; 12 December 2005; 7 February 2006 and 2 May 2006. Meeting minutes were sighted.</p> <p>A systematic process of issue identification, investigation, reporting and tracking is applied by both SLG and JOG to coordinate water quality data. The JOG continues to provide an effective forum for data sharing and information transfer. Examples included quarterly and annual reporting of water quality.</p> <p>No joint working groups were established although a "Catchment to Tap" seminar was run over the year.</p>
4.3	<p>Membership of the joint operational committees should include Sydney Water (a Strategic Operations, Water Quality Management, and Treatment Operation representatives) and Departmental (Manager Water Quality Unit and Policy Advisor Water Quality Unit) members.</p>	<p>Membership of Committee noted.</p> <p>Sydney Water: (Titles of SLG members have changed in the amended MOU).</p>



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
5.1	Disputes between the parties not resolved by the Joint Operational Group or the Strategic Liaison Group should be referred to the CEOs for resolution and if this is unsuccessful the views of the Department shall prevail.	No requirement. No disputes recorded.
6.1	The MOU can be amended at any time upon agreement of the parties. Where agreement is not reached the Department's view shall prevail.	MOU amended through agreement.
6.2	Where the Sydney Water's Operating Licence is amended then the parties shall meet to discuss the implications of the amendments and revise the Memorandum as required.	MOU amended through agreement.
7.1	The Corporation must ensure all drinking water it supplies is safe for drinking having regard to public health and supplied in accordance with its Operating Licence.	Refer to "Part 6 – Water Quality" for discussion.
7.2	The Corporation's Operating Licence requires it to: comply with nominated drinking guidelines (health and aesthetics); comply with fluoridation codes of practice; and implement a five-year Drinking water Quality Management Plan.	Refer to "Part 6 – Water Quality" for discussion.
7.2.1	The Corporation is to have regard to the 2004 Guidelines for best practice for water supply system activities.	Refer to "Part 6 – Water Quality" for discussion.
7.2.2	Sydney Water's Operating Licence requires that other grades of water supplied by Sydney Water must be supplied in accordance with relevant guidelines and requirements as prescribed.	Refer to "Part 6 – Water Quality" for discussion.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
7.3	The Corporation shall maintain internal complaint handling procedures for resolving customer complaints regarding water quality.	Refer to "Part 12 – Dispute Resolution" for discussion.
7.4	Sydney Water will consult with the Department in relation to planning issues arising from changes to the Australian <i>Drinking Water Guidelines</i> from time to time.	Performance requirement was implemented. Sydney Water consulted with NSW Health on the Guideline (For example, <i>Water Quality in Urban Rainwater Tanks</i> , SLG 15 th June 2005, Agenda Item 10.
7.5	<p>The Corporation shall prepare, to the satisfaction of the Department, a comprehensive Annual Drinking Water Quality Monitoring Plan for the water supply system by 31 March each year. The Corporation shall submit this plan to NSW Health for review and approval no later than 31 January each year. NSW Health shall determine it's approval no later than 28 February each year. The monitoring plan shall:</p> <ul style="list-style-type: none"> » include Health and aesthetic parameters; » be based on a statistically valid sampling program to meet the Guidelines; » Include monitoring locations such that the sampling results are representative of water supplied; » Require samples be tested in accordance with testing requirements; and » Require the Laboratories to be NATA registered. <p>Sydney Water shall carry out a monitoring program in accordance with the monitoring plan for each year.</p>	<p>Performance requirement implemented regarding the submission of reports by the due dates.</p> <p>Refer to "Part 6 – Water Quality" for discussion.</p>



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
7.6	The Corporation shall maintain an effective system of quality assurance for monitoring, sampling, testing and reporting and other processes in relation to water quality system in consultation with the Department.	Refer to "Part 6 – Water Quality, Clause 6.3.2" for discussion.
7.7a	Sydney Water shall submit to the Department on a quarterly basis monitoring results as agreed in the monitoring plan together with an evaluation of the results on an exceptions basis.	Sydney Water provided drinking water quality monitoring reports to NSW Health for each quarter. For example, Quarterly Drinking Water Quality Monitoring Results (and DOH confirmation of receipt of Reports) were sighted covering 1/10/2005 to 31/12/2005 and 1/4/2006 to 30/06/2006.
7.7b	Additional information on monitoring of water quality.	As above; Clause 7.7 c.
7.7c	the fourth quarterly reports required in 7.7a can be included as part of the annual report provided under 7.7b	Performance requirement implemented. Audit findings are detailed in Table 6.4 Clause 6.4 of this report.
7.7d	by 1 October each year, an annual report on the implementation of the Five Year Drinking Water Quality Management Plan, as required	Refer to "Part 6 – Water Quality" for discussion.
7.8	The Corporation will maintain a system to provide on-line access to test results for regulatory agencies during incidents.	Refer to "Part 6 – Water Quality" for discussion.
7.9	The Corporation or its authorised agents shall fluoridate monitor and report all drinking water supplies as well as sample and report upon such fluoridation in regard to the <i>Fluoridation of Public Water Supply Act 1957</i> .	Refer to "Part 6 – Water Quality" for discussion.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
7.10	The Corporation shall review with the Department its strategy for comprehensive management of public health issues no less frequently than every five (5) years or whenever substantial change exists. Strategies to be submitted for review include: Five (5) year drinking water quality management plan; and other strategies to protect public health.	Refer to "Part 6 – Water Quality" for discussion.
7.11	The Corporation shall provide to the Department all data and information on the planning, design, maintenance, operations and administration of the Corporation activities that the Department reasonably requires to make a judgement regarding matters relating to the protection of public health.	Refer to "Part 6 – Water Quality" for discussion.
7.12	The Corporation's responsibilities under this MOU apply to the whole of the Corporation's operations (including the whole of its water supply system), including those that are performed on behalf of the Corporation by a third party. Protocols are to be established between the Corporation and third parties to ensure the effective operation of the requirements of the MOU. Such protocols are to include joint procedures and training for the identification and notification of information and events of public health significance as described in clause 10.	Requirement implemented, for example, Sydney Water established an 85% Flow Protocol. Refer to "Part 6 – Water Quality" for discussion.
7.13	The Corporation must allow NSW Health officers entry into any premises for the purpose of carrying out inspections or viewing records to enable judgements regarding matters relating to the protection of public health to be made.	No issues of access occurred during the audit period. DOH has advised the auditor (letter 5/02/2007) that Sydney Water's performance under the MOU over 2006/06 had been <i>satisfactory</i> .



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
7.14	The Corporation has a role to ensure public health protection. This role must be recognised in any conflict or matters of mutual concern to both public health and environmental protection approaches and will require consultation with the DEC and the Department of Health. The Corporation must meet the environmental water quality requirements for any discharges or water releases required by licence issued to it by the DEC or the DLWC (now DIPNR).	NSW Health provided oversight of Sydney Water's 3 yearly licence and annual reviews of its water quality requirements. Refer to "Part 6 – Water Quality" for discussion.
8.1	NSW Health to provide advice to Sydney Water on matters regarding the supply of water which is safe to drink and other public health issues.	Sydney Water reported that NSW Health provided advice in regard to the reuse of water into rivers, incident management and on the Corporate Work Plan. Refer to "Part 6 – Water Quality" for discussion.
8.2	NSW Health shall provide advice to Sydney Water on wastewater management activities impacting public health.	See Clause 8.1
8.3	NSW Health shall make independent judgement on public health matters and exercise it's powers and functions under the <i>Public Health Act 1991</i> .	See Clause 8.1
8.4	Where the Corporation fails to meet the 2004 Guidelines or where the provisions of drinking water, or the reclamation, reuse, disposal or treatment of wastewater takes place in such a manner that a hazard to public health may arise, the Corporation is responsible for assessing the problem and proposing rectification action. The Department may provide advice on the rectification action although the Corporation shall be entirely responsible to take appropriate rectification action, ensuring the supply of drinking water is safe and meets the	See Clause 8.1.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
	requirements of the Sydney Water's Operating Licence and clause 7.2 and that other activities do not pose potential health hazard to public health. The Department will use Guideline information in providing such advice.	
8.5	NSW Health to report to IPART on Sydney Water's Implementation with the MOU, upon any public health matter or as considered appropriate.	No requirement on Sydney Water.
9.1	The parties shall cooperatively exchange information and the Corporation shall participate in appropriate research and development on emerging public health issues related to drinking water so as to enable them to make well informed judgements regarding action to be taken in relation to the Corporation's water supply system to maintain the protection of public health.	NSW Health and Sydney Water have a structured plan for R&D, which is reported to SLG.
9.2	The parties shall make independent input to public discussion debate on revisions of the <i>Australian Drinking Water Guidelines</i> or other grades of water	Sydney Water reported making no input in 2005/06
10.1	The Corporation shall immediately report to NSW Health any information or event within drinking water supply system or wastewater reclamation and reuse and wastewater reticulation, treatment and disposal operations which may have significant implications for public health.	Performance requirement implemented. No "significant" implications for public health arose over 2005/06 for Sydney Water.
10.2	The Corporations' report of information will include maps depicting the geographical location of systems in addition to tables or text, if required by NSW Health.	See Clause 10.1.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
10.3	The Corporation, in consultation with NSW Health and other agencies, shall maintain and update its Drinking Water Quality Incident Management Plan.	Refer to "Part 6 – Water Quality" for discussion.
10.4	The Corporation, in consultation with NSW Health or other government agencies shall, where appropriate, develop and implement incident management plans covering the Corporation's activities relating to waste water management.	Refer to "Part 6 – Water Quality" for discussion.
10.5	The parties shall nominate a 24-hour incident management contact point for coordinating responses to events of public health significance. The contact point will be an officer of each organisation who is appropriately trained. The incident management plan shall contain references, procedures and protocols for coordinated management of incidents, including media and stakeholder liaison and notification of public health advice from the Department.	Performance requirement implemented. The list was updated in the last 6 months to reflect staff changes and was tested regularly over the year.
10.6	NSW Health & Sydney Water shall ensure all relevant personnel are trained to respond and execute the incident management plan and the appropriate training exercise are jointly developed and conducted.	Training took place, for example, at the West Ryde leakage incident. Sydney Water tracks the training of its personnel to monitor and provide the training consistent with this clause. A communication protocol, drawing from the experience of exercise "Camel" was signed off and a further exercise, "Oliver", was planned for November 2006.
11.1	The Department will provide the Corporation with reports and studies that are relevant to those activities of the Corporation which impact on public health.	Refer to "Part 6 – Water Quality" for discussion.



Table F-2 MOU - NSW Health Implementation

Clause	Requirement	Comment
11.2	The Corporation will provide reports and studies undertaken as part of it's business relevant to public health	Refer to "Part 6 – Water Quality" for discussion..
12.1	The Department and the Corporation shall jointly undertake public education programs relating to health aspects of drinking water.	SLG Agenda (Item 15, 7 th Feb, 2006) included public education. Also, Sydney Water's Web site and "Water Wise" demonstrated such education.
12.2	The Corporation shall report to the public in accordance with Section 3.3 of its Operating Licence.	Refer to "Part 6 – Water Quality" for discussion.



Table F-3 MOU - Water Administration Ministerial Corporation Implementation

Clause	Requirement	Comment
"Introduction"	<p>The Sydney Water - Water Administration Ministerial Corporation (WAMC) MOU was executed on 28 June 2002 to provide a foundation for a cooperative relationship between the organisations. The "Introduction" sets out the water extraction, operation of works, activities on waterfront lands, water use (including demand management) role of WAMC and the role of Sydney Water and specifically Sydney Water's facilities including the North Richmond Water Filtration Plant, Manly Dam and Botany Wetlands.</p> <p>The MOU also recognises the relevance, objectives, and role of the SCA; namely to ensure the catchment areas and catchment infrastructure works are managed to protect and promote water quality, public health and the protection of the environment.</p>	No requirement. WAMC is now managed within DNR.
1. Parties to the Memorandum		No requirement.
2. Functions and objectives		
2.1 Functions of Sydney Water	<p>The functions of Sydney Water are identified as, "in the areas of operations", to provide, construct, operate, manage or maintain systems or services for:</p> <ul style="list-style-type: none"> » The supply of water, or; » Providing sewerage services, or; » Providing stormwater drainage services, or; » Disposing of wastewater. 	No requirement.



Table F-3 MOU - Water Administration Ministerial Corporation Implementation

Clause	Requirement	Comment
2.2 Principal Objectives of Sydney Water	Being to: » Be a successful business; » Protect the environment; and » Protect public health by supplying safe drinking water.	No requirement.
2.3 Special Objectives of Sydney Water	Includes: » Reduce risk to human health; and » Prevent the degradation of the environment.	No requirement.
2.4 Functions of the Department of Land and Water Conservation.	Including policy development, planning, databases, asset management, financial and technical support and management of the town and country water supply and sewerage programs.	The Department of Land and Water Conservation (DLWC) no longer exists. The MOU requires to be updated and refer to WAMC current host organisation, the Department of Natural Resources.
2.5 Objects Of The Department	Are listed as that which are directed to provide the sustainability and integrated management of the water sources, crown land and native vegetation.	No requirement. MOU requires updating.
3. Principles	Include: » The principles of ecologically sustainable development, relating to urban water use and integrated urban water cycle; » Recognition of the role of community and stakeholders; and » Agreements between the organisations will be in the public domain.	Requires review to ensure the 'principles' reflect the current Department (DNR).



Table F-3 MOU - Water Administration Ministerial Corporation Implementation

Clause	Requirement	Comment
4. Term	The term of the MOU is from 28 June 2002 until it remains in force until amended or replaced.	Efforts were commenced by Sydney Water in March 2006 to update the MOU by way of writing to the CEO of DNR.
5. Structures and Processes		
5.1 Chief Executive Officer (CEO) Meetings	The CEO's or respective deputies shall meet to discuss matters of mutual concern and those referred to it by the Strategic Liaison Group (SLG) on a regular basis, but not less than one per financial year. The meeting initiated by either party.	No formal meeting of CEOs or their deputies under the MOU took place over 2005/06, although the CEOs did meet in broader forums (viz: Drought Management Committee meeting). No matters were referred by the SLG to a CEO's meeting.
5.2 Strategic Liaison Group (SLG)	<p>The MOU requires:</p> <ul style="list-style-type: none"> » Establishment of the SLG; » Consideration of issues to be determined by the group, including: » Long-term strategic issues and policies; » Issues arising from the operation of catchment management boards etc; » Implication of DLWC objectives including water quality etc; » Areas for co-operative research and joint initiatives. <p>SLG will:</p> <ul style="list-style-type: none"> » Report to the CEOs; » Have a membership agreed between the parties; and » determine a meeting frequency and procedure. 	<p>No Strategic Liaison Group meetings were held over 2005/06. Also see comment under 5.1</p> <p>DNR was invited to comment on Sydney Water's performance under the Operating Licence and advised (received by auditor 7/02/2006) that the requirements of the MOU were "adequate" over the audit period. However, DNR noted, "increased <i>interaction between SWC and DNR that are poorly coordinated</i>", and made suggestions in this regard.</p>



Table F-3 MOU - Water Administration Ministerial Corporation Implementation

Clause	Requirement	Comment
5.3 Joint Forums	The clause notes stakeholders will convene joint forums on issues relevant to integrated urban water cycle in the catchment of Sydney Water's area of operation.	No joint forums were held under the MOU although both Sydney Water and DNR participated in external joint meetings (for example, Greater Metropolitan Return Flows Working Group).
5.4 Exchange of Information and Data.	Each party would supply and share relevant data and information as necessary and to do so on terms as agreed between the parties.	Similar to comment under 5.3, the exchange of information and data over 2005/06 was not driven by the MOU and no formal agreement exists for data exchange. Rather, data is transferred if, and when, needed. For example, data relating to the review of Sydney Water's licences with DNR.
5.5 Joint Programmes and Initiatives.	Joint programs and initiatives will be developed including the undertaking of research.	No specific joint programs were developed under the MOU, although both organisations participated in broad programs, (for example, potable water extraction project, Busby's Bore).
6. Dispute resolution	Any disputes between the parties would be resolved at the lowest level or alternately the SLG and, if still unresolved, to the CEOs. Finally, ultimate arbitration will be with the relevant ministers.	No disputes were raised at SLG or Ministerial levels. Numerous issues were resolved at CEO level, for example, the flow extraction issue at North Richmond Water Filtration Plant, although such matters were external to the MOU.



Appendix G

Customer Contract Compliance Table



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
1	Introduction	No requirement	
2	What is a Customer Contract and who is covered by it?	No requirement	This clause provides background information, a definition of the Customer Contract and who is covered.
3	What service does Sydney Water provide?		
3.1	<p>Water supply services</p> <p>3.1.1 Supply of drinking water</p> <p>Re whether High or Full compliance – explained at 7.5 Factors Affecting Compliance in Section 7 – if survey findings showed there was no room for improvement then only in those circumstances would there be Full compliance – this is the standard that has been employed in the past in accordance with the principle of continuous improvement and needs to be adopted in this report if consistency is to be maintained.</p>	High compliance	<p>Sydney Water is required to provide customers with drinking water within the terms of clause 3.1, which includes consideration of water quality, water pressure, supply of recycled water and health or special needs. While the physical characteristics of the water are reviewed in detail elsewhere, the results of the 2006 Annual Residential Customer Survey (Customer Survey) which was carried out in June 2006 and the Operating Licence Compliance Report (OLCR) were used as indicators of compliance.</p> <p>Water continuity information is provided for planned and unplanned events. During the audit period there 27,805 properties were affected by 422 unplanned events, which exceeded 5 hours. The standard requires that no more than 35,000 properties are impacted for over 5 hours, so Sydney Water has achieved the standard. It was noted there was an increase in the number of properties affected when compared to the previous year (19,214) and 2003/04 (16,345). The number of properties affected by planned interruptions (exceeding 5 hours) also increased from 8,527 in 2004/05 to 14,220 in 2005/06 but once again Sydney Water has met the standard (no more than 32,000 properties).</p> <p>The Customer Survey revealed that over one in five respondents (22 per cent) indicated that the water supply to their home had been disrupted in the last twelve months – a slight increase on the previous year result of 18 per cent. The OLCR also showed a sharp rise in the number of water supply reliability complaints from 397 in 2004/05 and 773 in 2005/06. This may be in large part attributable to the drought.</p> <p>The survey results show that there continues to be room for improvement in the area of water continuity and accordingly High compliance was achieved. This approach is adopted with respect to all clauses in the Customer Contract except where the sole measure of compliance is related to achievement in accordance with a specific benchmark. This approach is discussed in Section 7 at 7.5.</p>
	3.1.2 Drinking water quality	High compliance	Sydney Water reports, on page 22 of the OCLR, that it has complied with the water quality performance requirements set out in the Operating Licence and included tables to show that

Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			<p>percentage compliance in relation to various water quality guideline values increased compared with the previous three years.</p> <p>The level of customer satisfaction with the quality of tap water recorded through the Customer Survey indicates that 88 per cent of customers were <i>very satisfied</i> or <i>quite satisfied</i> which is similar to the past three years. In addition 89 per cent of respondents indicated that they thought that the water they received in their home had <i>gotten better</i> or <i>not changed</i> over the past few years – the highest percentage since 2003 when this question was first asked.</p>
	3.1.3 Drinking water pressure	High compliance	<p>In 2005/06 there were 2,076 properties that did not receive continuous water pressure at the main tap of at least 15 metres head as a result of abnormal operations (1,870 were reported in 2004/05) and 2,540 properties that did not receive continuous water pressure at the main tap of at least 15 metres head as a result of abnormal operations and capacity issues (OLCR page 29). The standard requires that no more than a total of 15,000 Properties experience water pressure failure in a financial year. Compliance has, therefore, been achieved.</p> <p>A total of 8 per cent of respondents to the Customer Survey indicated that they were <i>not very satisfied</i> or <i>not at all satisfied</i> with water pressure in their home in 2005/06, a slight decrease compared with the previous two years.</p>
	3.1.4 Supply of recycled water	High compliance	<p>Recycled water pressure and water continuity results were not reported in the 2005/06 OLCR. A High Compliance rating is therefore given on the basis that the results for water continuity and water pressure are included as a subset of the results referred to at 3.1.1 and 3.1.3. There is no survey data available about the supply of recycled water.</p> <p>Recycled water supplied to Customers is required to comply with relevant guidelines as set out in the Customer Contract. The OCLR at page 101 indicates that Sydney Water has met these guidelines.</p> <p>The Customer Contract also requires that information on the standard requirements for the safe use of recycled water be provided at the time that supply is commenced. Sydney Water provided copies of a recycled water kit supplied to residents as well as an information brochure '<i>Recycled Water in the Rouse Hill Area</i>'.</p>
	3.1.5 Health or special needs	High compliance	<p>Sydney Water discusses special needs with customers. Sydney Water has indicated that it informs relevant customers and institutions in a similar way to other customers regarding planned interruptions. Sydney Water advised that hospitals notify it of any dialysis patients and these patients are then recorded in Sydney Water's system.</p>



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
3.2	Sewerage services		
	<p>3.2.1 Supply of sewerage services</p> <p>Full compliance here because the issue is one of supply – the services were supplied without exception and the supply is not affected by issues concerning continuity as is the case for drinking water. Nevertheless it is arguable that the survey data could be interpreted as indicating that the service requires improvement and could therefore justify change to High compliance.</p>	High compliance	<p>No evidence was sighted that Sydney Water had refused to provide sewerage services to customers who were entitled to receive such services.</p> <p>The customer survey asked people to rate their satisfaction with Sydney's sewerage system. Only 9 per cent of customers (similar to previous years) said they were <i>Not very satisfied</i> or <i>Not at all Satisfied</i>. Net pollution/surcharge/odours, specifically waterways pollution (including that of beaches, rivers and the harbour), dislike of ocean outfalls and the desire to see more sewage recycled continue to be the most common reasons given for dissatisfaction with Sydney's sewerage system.</p>
	3.2.2 Sewage overflow	High compliance	<p>The OLCR reports sewage overflows as part of the performance indicators. The number of properties affected by dry weather uncontrolled sewage overflow events was reported as 22,572 (OLCR page 32). This was an increase from 2004/05 when 21,462 properties were affected and from 2003/04 when 19,612 properties were affected. However the 2005/06 figure remained below the compliance standard of 25,000 properties, indicating compliance with this performance measure.</p> <p>Overflows are closely associated with sewer chokes or blockages which are exacerbated in dry conditions as a result of causes such as aggressive tree roots which also have more effect on older infrastructure in the inner city where considerable high rise development is occurring. This combination of factors is likely to be one of the major reasons for the increase in overflow events.</p> <p>There were 367 wastewater overflow complaints in 2005/06 with the total number of sewerage service and reliability complaints being 543, slightly down from 557 in 2004/05. The response time to high priority sewer incidents was reported in the OLCR at page 49 and additional information is also contained in the '<i>Effective Complaints Handling, Compliance Reporting Measures</i>' (Emergency Contacts Report). This report deals with the level of satisfaction with the time it took for service people to come and showed that 85 per cent of respondents were satisfied in June 2006.</p>
	3.2.3 Blockage of sewer system	High compliance	<p>This is related to the commentary at 3.2.2 above.</p> <p>The community survey reports that the incidence of householders citing <i>too many overflows / surcharges</i> has continued to decrease from 22 per cent in 2003, to 13 per cent in 2004, 11 per cent in 2005 and 10 per cent in 2006.</p>



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
	3.2.4 Trade waste It is not KPI issue – it is measuring performance against the requirements set out in the Customer Contract.	Full compliance	Sydney Water has provided copies of its trade waste agreement, also available on its web site, along with information provided to customers including an industrial pack, industrial flow measurement information, commercial food industry pack, commercial motor vehicle pack and backflow pack.
3.3	Stormwater drainage services It is not KPI issue – it is measuring performance against the requirements set out in the Customer Contract. Agree that this could be regarded as Full compliance despite being a departure from last year's approach.	Full compliance	Maps are available from Sydney Water, which shows the properties that it services because the properties are in a declared stormwater drainage area. Further declaration of stormwater areas is unlikely to occur and none took place during the audit period. Sydney Water charges the fee for stormwater drainage services set by IPART. There were nine stormwater and drainage complaints to Sydney Water in 2005/06.
3.4	Factors affecting service		
	3.4.1 Repairs and maintenance It is not KPI issue – it is measuring performance against the requirements set out in the Customer Contract. The rating follows the practice concerning survey results referred to above	High compliance	The Emergency Contacts Survey reports upon the satisfaction of customers with repair work undertaken at their properties. Asked to rate their level of agreement with statements regarding repair work undertaken, 80 per cent and 82 per cent of contacts agreed with the statement <i>the service people left the area clean and tidy</i> for water and wastewater respectively. With regard to the statement <i>Sydney Water did all it could to fix the problem</i> , 77 per cent of customers had a high level of agreement if it was a water related issue while 78 per cent of customers had this level of agreement for waste water repairs. With regard to the statement <i>The problem was fixed quickly</i> , wastewater customers were more likely to have a high level of agreement (79 per cent) compared with water customers (69 per cent).
	3.4.2 Unplanned interruptions This clause reports on the compliance with a specific benchmark rather than dealing with the more general issue of water supply as at 3.1.1 – as indicated compliance with the benchmark for this clause was met and hence Full compliance recorded.	Full compliance	A 24 hours emergency telephone service is available and clearly advertised through the 24 hour emergency number section in the front of the white pages of the telephone book. The OLCR provides information on system performance concerning unplanned interruptions, water main breaks, bursts and leaks and repair time at pages 27 and 40 to 41. Some 27,805 properties had unplanned interruptions to water supply exceeding 5 hours which is less than the system performance standard of 35,000. Accordingly Full compliance has been achieved. However, 15,508 breaks and leaks were recorded in the drinking water trunk and water system between water treatment plants and properties. The weighted average time to repair bursts and leaks was 34.25 hours. This is a new benchmark



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			and historical data was not available. The Emergency Contacts Report indicates that in June 2006, 77 per cent of respondents were satisfied with the time that it took for Sydney Water to attend to a water supply problem and 85 per cent with respect to a waste water problem.
	3.4.3 Planned interruptions Comment as for 3.4.2 above	Full compliance	<p>A copy of the notice issued to households in the case of a planned interruption to water supply and sewerage services was sighted. This notice provides an indication of the time and duration of any interruption.</p> <p>The OLCR indicates that 14,220 properties had a planned and warned shutdown of water supply exceeding 5 hours, which is below the stated maximum allowance of 32,000 properties. Accordingly Full compliance has been achieved.</p>
	3.4.4 Restrictions in drought	Full compliance	Mandatory water restrictions are in force with Level 3 restrictions imposed in July 2005. The auditor noted a sample copy of a customer account which informs the customer about water restrictions together with the advertising schedule communicating the restrictions. The auditor also noted that the restrictions are listed on the Sydney Water website.
4	What you pay		
4.1	Responsibility to pay account	No requirement	Responsibility of customer.
4.2	Publication of charges	Full compliance	The information concerning charges is noted on the bill, advertised through a newspaper, published on the Sydney Water website and available upon request to the Sydney Water call centre. The auditor was provided with the advertisement placed in the Sydney Morning Herald on 30 September 2005 advising of the IPART price determination effective 1 October 2005, as well as being provided with other information hand-outs.
4.3	Concessions	Full compliance	<p>The pensioner rebate information is provided as part of the <i>Water Wrap</i> pamphlet for winter 2006 which was sighted and which was forwarded with quarterly bills in April to June 2005. The pamphlet is also available through the Sydney Water website. Information regarding concessions is also provided on accounts.</p> <p>Sydney Water advised that information on concessions was provided in languages other than English when people contacted Sydney Water and requested such information. Sydney Water has interpreters within the organisation and also uses outside interpreter services.</p>



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
4.4	Your account	Full compliance	There are a number of sub sections to this clause which include, when the account will be sent, what is on the account, how the accounts are to be sent, how payments can be made and the consequences of overdue account balances. Example accounts were sighted and the relevant information was included.
4.5	Undercharging	No requirement	Provisions are made for Sydney Water to recoup any instances of undercharging. However, no instances occurred in the audit period.
4.6	Overcharging There is no benchmark against which performance was measured – the rating reflects the fact that this category of complaints had the highest number recorded and that there is room for improvement.	High compliance	There were 4,594 complaints for the year about accounts/ rating / billing which represents the highest complaint category. While not all of these complaints are necessarily related to overcharging this figure does indicate a level of dissatisfaction with accounts issued by Sydney Water. The complaints system has now been refined so that metre misreads can be dealt with, separately, when required and they form the largest part of this aggregate figure of 4,594.
4.7	Account disputes	Full compliance	An action is placed in the system to stop billing occurring on the disputed amount. In situations of an account dispute, there was no evidence that Sydney Water sought the amount from the customer prior to the matter being resolved in its favour.
4.8	How prices are determined	Full compliance	Customers are informed about how prices are determined. This determination is carried out in accordance with the requirements of the Operating Licence and the Act and in accordance with the requirements and methodologies of IPART.
4.9	Notification of price variations	Full compliance	Customers are notified through their accounts and advertisements in newspapers of any changes to prices.
4.10	Other costs and charges	Full compliance	Details of charges, including ancillary service charges, can be found on Sydney Water's website and in a range of hand-out materials prepared by Sydney Water.
5	What can I do if I am unable to pay my account		
5.1	Payment difficulties	Full compliance	The pamphlet titled <i>Water Wrap</i> winter 2006 was sighted and contained the relevant information. This pamphlet was distributed in April to June 2006. Much of the relevant information was also contained in accounts sent to customers. During the audit period 12, 999 payment assistance vouchers were issued with a total value of \$324,965 which is a significant decrease from the

Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			2003/04 audit but similar to the previous audit. In addition 571 Flexi pay cards were issued and 12 instalment plans entered into which lasted for two or more consecutive quarters. A sample letter confirming an instalment plan was provided to the auditor.
5.2	Account relief	Full compliance	See 5.1 above.
6	Disconnection or restriction of water and sewerage services		Much of the evidence used to evaluate this section relates to Clause 5.3 of the Operating Licence (Code of practice and procedure on debt and disconnection).
6.1	Disconnection or restriction of supply for non-payment	Full compliance	There were no indications that supply had been restricted without providing notices under clause 6.2 of the Customer Contract. The OLCR indicates no properties were disconnected for non-payment and 1,879 had flow restrictions implemented for non-payment in the audit period (an increase from 917 last year).
6.2	Notice of disconnection or restriction of supply of water	Full compliance	Sample notices as stipulated in this clause have been sighted.
6.3	Disconnection or restriction for other reasons	Full compliance	No figures showing the number of properties disconnected for other reasons were sighted but it was advised that two properties were disconnected from the sewerage system due to inappropriate use of chemicals.
6.4	Minimum flow rate during restriction	No requirement	Information provided to the customer. There were no complaints that community health was impacted.
6.5	Limitations on disconnection or restriction	Full compliance	No evidence was identified to suggest that these conditions were not observed by Sydney Water.
6.6	Disconnection by a customer	Full compliance	<p>Sydney Water provides information which shows whether water or sewer has been disconnected from Sydney Water's system. A report setting out details of properties disconnected during 2005/06 was provided to the auditor. There is no evidence to suggest that customers have not been able to disconnect if they so wish.</p> <p>Sydney Water also records the number of customers who have access to water and sewer but are presently not connected. There was one dispute about disconnection unresolved at the time of the audit concerning the location at which the customer wishes to block the main.</p>
6.7	Restoration of supply after restriction or disconnection	High compliance	It is noted that 1,879 properties had flow restrictions placed on them during the year. The auditor was provided with a listing of property numbers that indicated the date of the last restriction and the date of the last reconnection for the audit period. The report also included information about



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			the amount of time that restrictions were in place and whether credit was received or arrangements made to allow the reconnection. The majority, but not all, cases appear to have been restored, as required.
7	Redress		
7.1	Notification Altered to reflect that strict terms of Contract concerning notification of rights of redress have been followed – a departure from last year but appropriate.	Full compliance	Sydney Water reports that it provides a substantive response to 99.15 per cent (99.91 per cent in the previous audit) of customer complaints within the required time (two working days for a face-to-face or telephone contact and 5 working days for a written contact). Sydney Water also indicated that it provided a resolution to 89.73 per cent (85.95 per cent in 2004/05) of customer complaints within 10 days. Sydney Water's complaints handling procedures require that appropriate information regarding redress, as set out in the Customer Contract, be provided to complainants and evidence was provided to indicate that this notification had occurred.
7.2	Rebates	Full compliance	The OLCR indicates the number and dollar value of rebates issued. Rebates related to water continuity are provided with a further breakdown for recycled water. For the 12 months ending 30 June 2006, 283,636 rebates were paid compared to 256,594 in the previous year. Further sub-categories and breakdown of rebates was provided for water pressure, sewer overflows, dirty water and boiled water alerts which are all detailed in the Customer Contract. A total of \$3,641,447 (compared with \$3,337,480 last year) has been paid as rebates in the 12 months ending 30 June 2006 with an average amount of \$12.84 being paid per customer. The average amount per customer is similar to last year's figure of \$13.01.
7.3	Rebates for recurring sewerage service disruption or internal overflows	Full compliance	There were a total of 20,981 rebates paid for sewer overflows valued at \$602,411 during the audit period. The overall number and value has decreased compared to last year, as has the average value per rebate paid, which declined slightly from \$30.89 to \$28.71.
7.4	Redress	Full compliance	Sydney Water reports that all these options have been considered/implemented, when required.
7.5	Claim for damages	High compliance	There were 61 liability claims identified as the responsibility of Sydney Water for the period listed in the OLCR. This is a significant increase from the previous year of 19 claims and from 2003/04 when there were only five claims. The auditor sighted a number of letters responding to claims for damages by complainants. The majority of response letters were forwarded within the required five working day time frame and provided the required information. However the letters did not give details about how the claims would be investigated.
7.6	Limitation of liability	No requirement	No evidence has been sighted that is relevant to this clause.

Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
8	Responsibilities for maintenance		A number of these areas are investigated through the system asset management audit.
8.1	Water pipes	No requirement	Primarily for the information of customers.
8.2	Your sewer system	No requirement	Primarily for the information of customers.
8.3	Joint private water or sewer system	No requirement	Primarily for the information of customers.
8.4	Conserving water	Full compliance	Information is provided through the Sydney Water website and brochures on mechanisms to be adopted to conserve water.
8.5	Defective work	Full compliance	Sydney Water issued several ' <i>Notice to Correct Defective Private Service</i> ' letters to customers, on average, each week during the audit period. There were no objections to the time frames in which work was required to be carried out and no instances where Sydney Water had to enter properties to conduct the work themselves.
8.6	Giving notice of system failure	No requirement	Primarily for the information of customers.
8.7	Building work	No requirement	Primarily information for the customer.
8.8	Altering and unauthorised connection or use	No requirement	Primarily information for the customer.
8.9	Removal of trees	No requirement	This clause was not invoked during the audit period.
9	Entry onto a customer's property for maintenance		
9.1	Access to Sydney Water's system	No requirement	Primarily information for the customer.
9.2	Identification	Full compliance	On the notification of interruption to service it clearly indicates, "Sydney Water employees are required to wear identification".

Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
9.3	Notice of access	High compliance	<p>Copies of letters giving the appropriate notice were provided to the auditor.</p> <p>As reported last year, the Emergency Contact Report continues to show that only a small proportion of customers who did not see the work crew received a calling card. Only 17 per cent of the customers with a water problem and 10 per cent with a waste water problem who did not see or speak to the work crew said they received a calling card. The issue of notice of visits in response to emergency contacts requires improvement.</p>
9.4	<p>Impact on customer's property</p> <p>There is no set benchmark and the practice of recording High compliance where survey data illustrates room for improvement, has been followed.</p>	High compliance	<p>The Emergency Contacts Report indicated 78 per cent of customers were <i>highly satisfied</i> if their wastewater problem had been fixed or partially fixed while 81 per cent of customers with a water problem were <i>highly satisfied</i>. This evaluation continues to be an important source of information on the performance of Sydney Water in relation to its customers following repair work.</p> <p>12 per cent of customers with a water problem who gave an eight or less satisfaction rating indicated that Sydney Water needed to clean up afterwards/restoration work while 14 per cent of those with a wastewater problem and a similar satisfaction rating needed clean up/restoration work.</p> <p>Generally the ratings for this indicator were lower than last year and this may be an area that Sydney Water needs to focus on.</p>
10	Water meter installation, testing and maintenance		
10.1	<p>Measuring water supplied</p> <p>No benchmark or KPI but one of the largest areas of complaint.</p>	High compliance	<p>Sydney Water reports only 0.0055 per cent (0.0006 per cent in the last audit period) of metered accounts receive a bill, which is not based on a meter reading.</p> <p>However, there were 2,594 complaints about meter misreads in 2005/06 suggesting that this may be an area that Sydney Water needs to investigate and improve.</p>
10.2	Water meter installation and maintenance. No KPI but complaints increasing.	High compliance	Meters are provided. Sydney Water reported 251 general complaints about meters, compared with 196 in the previous audit period and 60 such complaints in 2003/04.
10.3	Meter testing	Full compliance	As testing is expensive and this cost needs to be met by the customer (if the meter is not faulty) effort is made to negotiate with the customer prior to sending the meter for testing. If testing is the course of action taken then the meter will be replaced (in order to send the meter for testing). If the meter is found to be faulty Sydney Water will refund the money for the test via an adjustment in the account.



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			Sydney Water provided copies of letters forwarded to customers after meter testing had been carried out as well as copies of relevant workshop reports.
10.4	Access to the water meter	No requirement	Primarily for the information of the customer.
10.5	Meter replacement	Full compliance	Sydney Water continues to maintain a meter replacement and exchange program. Sydney Water indicated that complying with notice requirements set out in the Customer Contract was part of the implementation of this program in the audit period.
11	Who can I speak to if I have any questions or want to make enquiries?		
11.1	Telephone enquiries	Full compliance	Enquiries were responded to immediately in that they were answered and directed to the relevant section. The OLCR indicates at page 15 that the average time (in seconds) taken for a caller to be connected to an operator was 20.13 seconds, while it was 25.91 in the previous year and 18.8 in 2003/04. The customer was informed of any action taken. The contact number is advertised as indicated.
11.2	Written enquiries	Full compliance	It is understood that an interim written response or phone call is provided within 5 days of receipt of a written enquiry. There is no indication of non compliance with this undertaking in the Contract. The required response time for a customer complaint is 2 working days for a face-to-face or telephone contact and 5 working days for a written contact. Sydney Water advises that 99.15% of complaints were responded to in the required time period.
11.3	Emergency enquiries	Full compliance	The appropriate phone numbers have been sighted in the phone book, pamphlet and on the account.
11.4	Interpreter and TTY service	Full compliance	These services are listed on Sydney Water's account.
12	If I am unhappy with the service provided by Sydney Water what can I do?		Detailed analysis of compliance concerning complaints is covered in Chapter 10 Dispute Resolution.
12.1	Customer complaints 7.1 relates to notification of rights to redress and I have changed this to Full compliance – this clause is different but	Full compliance	Sydney Water reports as part of the OLCR that 99.15 per cent of complaints were responded to within the required time frame and approximately 89.73 per cent of complaints were resolved within 10 days.



Table G.1 Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
	also rates Full compliance due to the very high number of complaints dealt with within the relevant time frames.		
12.2	Complaints review	Full compliance	There is a procedure for the escalation of complaints to a Manager and this is documented electronically and is part of the Complaint Handling System within Sydney Water.
12.3	Resolution of disputes	No requirement	Primarily for the information of customers. Internal dispute resolution is reviewed in Chapter 6.
12.4	External dispute resolution	No requirement	Primarily for the information of customers. External dispute resolution is reviewed in Chapter 6.
13	Consultation, information and privacy		
13.1	Involving customers in service planning	High compliance	Customer Councils are discussed under the review of Section 7, Clause 5.4. Not <u>all</u> aspects rated Full compliance and accordingly a High compliance rating has been achieved overall.
13.2	Provision of information	High compliance	<p>Sydney Water complies with the provisions of the Freedom of Information Act 1989 as reported in the 2005/06 Annual Report.</p> <p>Sydney Water dealt with 18 external and 18 internal requests for information with one breach of privacy. Following review, Sydney Water implemented a number of improvements and notified the NSW Privacy Commissioners office. This area is one where continued vigilance on the part of Sydney Water is required; with an ongoing review necessary to ensure that the changes implemented to prevent further privacy breaches are effective.</p>
13.3	Privacy	Full compliance	<p>The auditor was provided with information published by Sydney Water on its web site, which says, "From 1 April 2002, Sydney Water Corporation ("Sydney Water") has voluntarily committed to complying with the NSW Privacy and Personal Information Protection Act 1998 (the Act). This commitment is stated in the Customer Contract and requires Sydney Water to protect the privacy of its customers, business contacts and employees."</p> <p>Sydney Water provided a detailed outline of actions taken in this area during 2005/06 including maintenance of policies, procedures and processes necessary to manage personal information and detailed training and awareness initiatives directed towards staff and their handling of these issues. A document for public distribution 'Your Privacy and Sydney Water Corporation' is expected to be completed in late 2006.</p>

**Table G.1 Customer Contract Compliance Table**

Clause	Requirement	Compliance	Findings
			While there was a breach of privacy in the context of the provision of information (see 13.2 above) Full compliance has been achieved due to the vigilance of Sydney Water in ensuring that its policies and procedures are as effective as possible and given that that the breach is reflected in the High compliance rating for 13.2 above.
14	When does my customer contract with Sydney Water terminate?	No requirement	Primarily for the information of customers.
15	Dictionary and interpretation	No requirement	Primarily for the information of customers.



Appendix H

Comments from Government Agencies

Ms Rebecca Raap
Audit Coordinator
GHD Pty Ltd
10 Bond St
SYDNEY NSW 2000

* Received 9/2/07

* Scanned and saved to 21/15212

Dear Ms Raap

I refer to your letter to the Director-General, Ms Robyn Kruk, regarding the audit of the Sydney Water Corporation Operating Licence. The Director-General has asked that I respond on her behalf. Thank you for the opportunity to provide input to the audit process.

The NSW Department of Health meets regularly with Sydney Water at officer and strategic levels. The Department is satisfied that Sydney Water has met its public health obligations under the Operating Licence and Memorandum of Understanding. I have attached detailed comments in relation to the audit.

During the audit period the Memorandum of Understanding (MoU) between Sydney Water and NSW Health was reviewed and amended. The revised MoU was released for stakeholder and public comment before being adopted in February 2006.

The NSW Government has endorsed the *Australian Drinking Water Guidelines 2004* as a model for best practice. The Operating Licence requires compliance with the health-related guideline values of the 1996 Guidelines. It is the Department's expectation that Sydney Water will have regard for, and comply with, the 2004 Guidelines. Total coliforms are not considered a health-related indicator in the 2004 Guidelines. The Department only requires the notification of total coliforms where there is an unusual change in occurrence, and does not require compliance for this characteristic.

The Department is working with Sydney Water to review responses and communication arrangements in the event of a contamination threat or incident. The Department will continue to work with Sydney Water and the Sydney Catchment Authority to ensure that monitoring is aligned with the 2004 Guidelines.

I trust that this information will assist with the audit process. Should you require further information, please contact Sandy Leask on 9816 0537.

Yours sincerely



Dr Vicky Sheppeard
A/Director Environmental Health

5/2/07

NSW Health Comments – Sydney Water 2005/06 Operational Audit

Operating Licence Clause	Requirement	NSW Health comments
2.3	Memorandum 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.	<i>Compliance with requirements:</i> The Memorandum of Understanding (MoU) between the Sydney Water Corporation (SWC) and NSW Health was first agreed on 21 Nov 1997 and most recently amended on 15 Feb 2006.
		<i>Progress to meeting requirements (of MoU):</i> <ul style="list-style-type: none"> - The Strategic Liaison Group (MoU clause 4.1) and Joint Operational Group (4.2) met regularly - Quarterly water quality monitoring reports were provided (7.7) - Fluoridation was carried out and reported on (7.9) - Notification of events that might adversely affect public health occurred (10.1) - Incident management plans maintained and updated (10.4) See other items below.
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
2.3.2(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.	<i>Compliance with requirements:</i> The MoU acknowledges this role for NSW Health.

Operating Licence Clause	Requirement	NSW Health comments
2.3.2(a) continued		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
Part 3	Water Quality	
3.1	Drinking Water Quality - Standards	
3.1	In delivering the services, Sydney Water must have regard to the concepts of good practice set out in the <i>Australian Drinking Water Guidelines</i> 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health	<i>Compliance with requirements:</i> Amendments to the MoU recognise the introduction of the <i>Australian Drinking Water Guidelines</i> (ADWG) 2004. As recommended by the ADWG, water supplied by SWC complies with the Guideline values in at least 95% of sample results. For most characteristics, compliance was 100%.
		<i>Progress to meeting requirements:</i> SWC has been working to align its activities with the <i>Framework for the Management of Drinking Water Supplies</i> included in the 2004 Guidelines.
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory

Operating Licence Clause	Requirement	NSW Health comments
3.2	<p>Drinking Water Quality – Monitoring</p> <p>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 the Licence and must:</p> <ul style="list-style-type: none"> 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. 	<p><i>Compliance with requirements:</i></p> <p>The Drinking Water Quality Monitoring Plan for 2005/6 was provided in March 2005. It describes changes to the routine monitoring program for the 2005/6 financial year, and outlines the laboratory quality control processes. There is a discussion of the changeover from the ADWG 1996 to the ADWG 2004, and a list of changes to characteristics to be monitored. Changes to the number of samples collected from particular zones of supply due to detections of indicator bacteria in the previous year are discussed. The Plan also sets out reporting requirements to NSW Health</p>
		<p><i>Progress to meeting requirements:</i></p> <p>Completed</p>
		<p><i>Details of any specific incidence of non compliance:</i></p> <p>Nil</p>
		<p><i>Adequacy of actions being taken:</i></p> <p>Satisfactory</p>

Operating Licence Clause	Requirement	NSW Health comments
3.2 continued		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
3.3	Drinking Water Quality – Reporting	
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.	<i>Compliance with requirements:</i> Four quarterly reports were provided to NSW Health covering the 2005/6 period.
		<i>Progress to meeting requirements:</i> Completed
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
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 from specified by NSW Health.	<i>Compliance with requirements:</i> Requests for additional information were made during investigations of several incidents including the detection of <i>E. coli</i> in treated water samples, a break-in at a reservoir, and widespread taste and odour complaints (April 2006). Information was supplied in an appropriate form.
		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil

Operating Licence Clause	Requirement	NSW Health comments
3.3.3 continued		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
3.4	Drinking Water Planning	
	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. <i>(The auditor notes a comprehensive Five Year Drinking Water Quality Management Plan has been prepared.)</i>	<i>Compliance with requirements:</i> As noted, the 2005-2010 Comprehensive Drinking Water Quality Management Plan has been prepared. Consultation was undertaken with stakeholders (including NSW Health) and the community.
		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory

Operating Licence Clause	Requirement	NSW Health comments
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.	<p><i>Compliance with requirements:</i> The Five Year Drinking Water Quality Plan has been prepared taking account of the concepts of good practice in the <i>Framework for the Management of Drinking Water Quality</i>, ADWG 2004. NSW Health has approved the Plan.</p>
		<p><i>Progress to meeting requirements:</i> Completed</p>
		<p><i>Details of any specific incidence of non compliance:</i> Nil</p>
		<p><i>Adequacy of actions being taken:</i> Satisfactory</p>
		<p><i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory</p>
3.4.4	<p>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:</p> <ul style="list-style-type: none"> 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. 	<p><i>Compliance with requirements:</i> This report was prepared according to requirement. There were no changes to the five year drinking water quality monitoring plan, and additional water quality improvement actions undertaken during the 2005/6 period are reported. The most important of these was the adoption of the ADWG 2004.</p>

Operating Licence Clause	Requirement	NSW Health comments
3.4.4 continued		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
3.5	Drinking Water – Incident Management	
3.5.1	Sydney Water must immediately report to NSW Health any information or events in the delivery of the services or in its systems or operations which may have risks for public health.	<i>Compliance with requirements:</i> Sydney Water complies with the agreed protocol to report to NSW Health events in the drinking water supply that might affect public health, and dry weather sewer overflows near vulnerable populations. Reports are made by telephone and through an on-line notification system.
		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
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.	<i>Compliance with requirements:</i> The incident management plan has been maintained.

Operating Licence Clause	Requirement	NSW Health comments
3.5.2 continued		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
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.	<i>Compliance with requirements:</i> The Incident Management Plan addresses the specified issues.
		<i>Progress to meeting requirements:</i> Completed
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
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 <i>Australian Drinking Water Guidelines</i> 1996 and must apply these concepts in the manner, form and timeframes specified by NSW Health.	<i>Compliance with requirements:</i> The Incident Management Plan takes account of concepts of good management in the ADWG 1996 and the Framework for the Management of Drinking Water Quality, ADWG 2004.
		<i>Progress to meeting requirements:</i> Satisfactory

Operating Licence Clause	Requirement	NSW Health comments
3.5.4 continued		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory
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	<i>Compliance with requirements:</i> Recycling schemes have complied with relevant guidelines. Reports on the operation of the Rouse Hill Recycled Water Scheme, Illawarra recycling scheme and irrigation schemes from other sewage treatment plants are sent to NSW Health or reported directly through the on-line notification system.
		<i>Progress to meeting requirements:</i> Satisfactory
		<i>Details of any specific incidence of non compliance:</i> Nil
		<i>Adequacy of actions being taken:</i> Satisfactory
		<i>Adequacy of the requirements of the Licence and MoU:</i> Satisfactory

	Comment	NSW Health response
	Auditor comment:	Health comment
	<p>The Licence requires compliance with <i>Australian Drinking Water Guidelines</i> 1996, Sydney Water advise that NSW Health will require future compliance with the 2004 Guidelines</p>	<p>The Operating Licence requires compliance with the health-related guideline values of the ADWG 1996. In amending the MoU, NSW Health inserted the following clause: <i>The NSW Government has endorsed the 2004 Guidelines as a model for best practice. The Corporation is to have regard for the 2004 Guidelines and any updated Guidelines when conducting its water supply system activities.</i></p> <p>It is NSW Health's expectation that SWC will comply with ADWG 2004 (for most characteristics there is no difference between the Guidelines). SWC took this into account in their planning and policies during the audit period.</p>
	<p>Does NSW Health have any requirements with respect to reporting and compliance for Total Coliforms?</p>	<p>Total coliforms are not considered a health-related indicator in the ADWG 2004.</p> <p>NSW Health only requires the notification of total coliforms where there is an unusual change in the pattern of coliform occurrence and counts, and there is no logical explanation. NSW Health does not require SWC to comply with the ADWG 1996 for total coliforms.</p>



NSW Government

DEPARTMENT OF NATURAL RESOURCES

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Ms Rebecca Raap
Audit Coordinator
GHD Pty Ltd
10 Bond Street
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Our ref: SWCL7; 03/07
Your ref: 21/15212/123971
File: 2007-01-08 letter re Op Lic audit 2005-06.doc

5 February 2007

Received 7/2/06

Scanned and Saved to 21/15212

Dear Ms Raap

Subject: Operational Audit of the Sydney Water Corporation 2005/06

I refer to your letter dated 21 December 2006 inviting comments from the Department of Natural Resources (DNR) on the audit of Sydney Water Corporation's (SWC) Operating Licence for the period 1 July 2005 to 30 June 2006.

The Department has reviewed the Operating Licence in consideration of the attachment to your letter and makes the following specific comments:

Clause 2.3 – Memorandum of Understanding

The original Memorandum of Understanding between DNR and SWC was developed in 1996. The document was revised in 2002 to reflect modifications to the legislation administered by or governing these parties. The document is currently being revised again to reflect the department's name change to the Department of Natural Resources and to capture the increased interaction between SWC and DNR.

The requirements of the Memorandum of Understanding were adequate for the period covered by this audit. However, DNR has noticed increased interactions between SWC and DNR that are poorly coordinated. It appears that numerous different issues are dealt with by differing sections of each organisation, resulting in some projects being managed independently of other (possibly similar) matters and minimal coordination between issues. This could be resolved through a single contact point in DNR for all issues, which could be the Corporate Licensing Unit that administers the Water Management Licence issued to SWC on behalf of the Ministerial Corporation.

As an example, a major new recycling project, the Western Sydney Recycled Water Initiative, could have had more strategic input through the Strategic Liaison Group established under the Memorandum of Understanding. As part of the Metropolitan Water Plan, the Western Sydney Recycled Water Initiative will provide recycled water via dual reticulation to all 160,000 new homes to be built in new suburbs in Sydney's north west and south west, as well as for agriculture, industry and replicating natural river flows downstream from dams.

Clause 3.6 – Other Grades of Water

The clause 3.6.1 should be amended to reflect the change in name from DIPNR to DNR.

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 2006-2011 was released in July 2006, just after the audit period. DNR was consulted on the development of the new Plan during the 2005/06 audit period.

Should you have any further enquiries about this matter please contact Mr Richard Nevill on telephone (02) 4729 8127 or email Richard.Nevill@dnr.nsw.gov.au .

Yours sincerely

A handwritten signature in black ink, appearing to read 'Salim Vhora', with a long, sweeping horizontal stroke extending to the right.

Salim Vhora
Manager Corporate Licensing Unit
Compliance and Licensing

Your reference : 21/15213/123981
Our reference : ED06/500
Contact : Joe Woodward , 9995 5400

Mr M Pignatelli
Manager - Environmental Audit
GHD Pty Ltd
10 Bond Street
SYDNEY NSW 2000

Attention: Rebecca Raap

Dear Mr Pignatelli


**Operational Audits of Sydney Water Corporation and Hunter Water Corporation 2005/06 –
request for comment by Department of Environment and Conservation**

I refer to your letters dated 21 December 2006 regarding the above matters and apologise for the delay in responding. I am replying on behalf of our Director General, Lisa Corbyn.

Please find enclosed two attachments which provide further details in relation to your requests.

If you have any further queries please contact me on 9995 5400.

Yours sincerely


JOSHUA GILROY 9/3/07
Assistant Executive Director Operations
Environment Protection and Regulation

Enclosure





Department of Environment and Conservation (NSW)

ATTACHMENT

2005-2006 AUDIT OF SYDNEY WATER CORPORATION 2002-2010 OPERATING LICENCE

Clause 2.3 Memorandum of Understanding

2.3.1 Maintain an MoU with DEC

Compliance with requirements: Satisfactory

Progress to meeting requirements: Satisfactory

Adequacy of actions being taken: Not applicable

Adequacy of the requirements: Adequate

An updated Memorandum of Understanding (MOU) between DEC and SWC came into effect in the 2005-2006 audit year. The update reflected the merger of the former Environment Protection Authority and National Parks and Wildlife Service and other agencies into DEC. The consultative mechanisms required by the MOU, including Chief Executive Officer meetings, Strategic Liaison Group (SLG) and Operational Policy Committee (OPC) meetings, continued unchanged. During 2005-2006, the SLG met two times and the OPC met three times. A third scheduled SLG meeting in June 2006 was postponed by mutual agreement.

2.3.2(b) MoU recognises DEC as environmental regulator and commits Sydney Water to environmental improvements

Compliance with requirements: Satisfactory

Progress to meeting requirements: Satisfactory

Adequacy of actions being taken: Adequate

Adequacy of the requirements: Adequate

i) Recognition of DEC as environmental regulator

The *Protection of the Environment Operations Act 1997* (POEO Act) designates DEC (in the name of the EPA) as the appropriate regulatory authority for the activities of public authorities, including Sydney Water. The MoU recognises DEC as the environmental regulator of Sydney Water's activities.

ii) Commitment of Sydney Water to environmental improvements

In accordance with the provisions of the POEO Act, DEC licences Sydney Water's sewage treatment systems. These licences require Sydney Water to continuously improve its environmental performance and to report on its progress. The operation and maintenance of Sydney Water's water supply infrastructure are not licensed by DEC. DEC expects Sydney Water to use industry best practice in the construction, maintenance and repair of assets, to avoid unnecessary environment harm.

Sewage Treatment Plants

During 2005-2006, Sydney Water's coastal and inland sewage treatment plants (STPs) generally complied with licence limit requirements. A small number of exceedances of pollutant load and concentration limits occurred at one STP. Following consideration of Sydney Water's explanation for the non-compliances, DEC decided no further regulatory action was warranted.

Sydney Water also reported non-compliances with routine STP monitoring requirements at a number of STPs on individual days. DEC considered these non-compliances to be minor and of no environmental consequence. In each case, Sydney Water undertook prompt and appropriate action to rectify the matter to prevent recurrence and take additional samples.

In the 2004-2005 audit response, DEC cited an incident in June 2005 where effluent containing high ammonia concentrations was discharged from the West Hornsby STP. Further, Sydney Water failed to report this as a licence non-compliance. DEC completed its investigations in 2005-2006 and issued a penalty infringement notice for the incident.

A penalty infringement notice was also issued to Sydney Water for an odour incident which happened at the Malabar STP in January 2006. DEC undertook a further investigation regarding an odour incident at Malabar STP in February 2006; as the investigation was not concluded until December 2006, the outcome will be reported in the 2006-2007 audit response.

Dry Weather Overflows

Sydney Water reported an increase in 2005-2006 in the number of individual dry weather overflows across its reticulation systems. DEC accepts Sydney Water's explanation that this is related to the extended drought in Sydney, which has resulted in a large number of tree root blockages of reticulation systems. DEC also accepts Sydney Water's explanation of increased response times to some sewer overflow incidents as a result of priority being given to water main breaks in this time of water shortage.

During 2005-2006, DEC investigated selected dry weather sewer overflows with the potential to cause environmental harm, to assess whether all measures were taken by Sydney Water to minimise harm and whether the appropriate notifications were given to third parties as required by the environment protection licences. DEC was satisfied with the findings of these investigations.

Wet Weather Overflows

The sewage treatment system (STS) licences requires no deterioration and ongoing improvement in system environmental performance compared to agreed baseline performance indicators. DEC notes that the number of STSs that did not comply with the wet weather performance requirements has decreased from eight to seven. Commencing in 2005-2006, DEC imposed wet weather overflow frequency limits on the licences for the 17 inland STSs. The wet weather overflow frequency limit was exceeded in three of these systems in this first year. Sydney Water is progressing with works and activities required by Pollution Reduction Programs in the licences to return the three systems to complying performance and to meet lower 2010 wet weather overflow targets for all 17 systems.

During 2005-2006, Sydney Water has generally complied with licence conditions at its water filtration plants. DEC's investigation of an incident involving a discharge of acid to the Hawkesbury River from the North Richmond plant in December 2004 was concluded in 2005-2006. DEC decided that neither a prosecution nor issue of a penalty infringement notice could be supported in the full circumstances surrounding the incident, and no further action was warranted.

ATTACHMENT 2**2005-2006 AUDIT OF HUNTER WATER CORPORATION 2002-2010 IPART Operating Licence****Clause 3.3 Memorandum of Understanding****3.3.3 MoU Acknowledgement that Hunter Water has entered into MoU with EPA as at the commencement date**

The Memorandum of understanding between the Department of Environment and Conservation (DEC) and Hunter Water Corporation ("Hunter Water") expired on 30 June 2005. DEC and Hunter Water are continuing to meet on a regular basis and work cooperatively on both regulatory administrative and compliance issues and the prioritisation of programs to improve the environmental performance of Hunter Water's sewage treatment systems. Given the current working relationship, DEC and Hunter Water are not seeking to renew the Memorandum.

6.6.1 Other grades of Water supplied according to relevant DEC guidelines

To the extent that Hunter Water's Environment Protection Licences include discharge points for treated effluent reuse schemes, the limits specified in the licence take into consideration relevant guidelines and site specific environmental assessment. DEC monitors Hunter Water performance against the pollutant limits specified in each licence.

6.7.1 Hunter Water must provide environmental water quality reports for discharges/water to DEC

Hunter Water's Environment Protection Licences include specific monitoring and reporting requirements. Hunter Water is required to submit an 'Annual Return' annually for each licence. The annual return is signed by the Managing Director and certifies the extent to which Hunter Water has complied with the licence conditions.

DEC is broadly satisfied with Hunter Water's level of compliance with licence conditions and progress on agreed sewage treatment system improvement programs.



Clause 3.6 Other Grades of Water**3.6.1 Other grades of water supplied according to relevant DEC guidelines**

Compliance with requirements: Satisfactory

Progress to meeting requirements: Satisfactory

Adequacy of actions being taken: Adequate

Adequacy of the requirements: Adequate

Sydney Water supplies suitably treated effluent for domestic use, commercial irrigation and industrial purposes. The Wollongong STP has capacity to supply 20 ML per day of treated effluent to Bluescope Steel for industrial use, in place of dam water that is more suitable for treatment to potable standard. Recycled water is provided to the Rouse Hill development area for non-potable uses such as flushing toilets and watering gardens. The Picton STP and the Gerringong - Gerroa sewerage scheme both provide recycled water for local agricultural use. Several other STPs supply treated effluent to local golf courses and playing fields.

A number of Sydney Water's STS licences allow suitably treated effluent to be tinkered to Sydney Water customers on demand in accordance with DEC effluent irrigation guidelines. The licences include conditions regarding the quality of this water. Sydney Water complied with these licence conditions in 2005-2006.

Clause 7.2 Environment Management**7.2.7 DEC consultation on Sydney Water's Environmental Plan**

Compliance with requirement: Satisfactory

Progress to meeting requirement: Satisfactory

Adequacy of actions being taken: Adequate

Adequacy of the requirement: Adequate

Sydney Water formally consulted DEC on the format and performance indicators for its 2006 Environment Plan. Minor changes were suggested by DEC. DEC is satisfied with Sydney Water's consideration and decisions regarding the suggestions and comments offered.



Appendix I

Environmental Indicators Compliance Table



Table I.1 Appendix I – Compliance with Environmental Indicators

Environmental Performance Indicator	Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
Water Conservation, Reuse, Recycling				
1 Potable Water Drawn	Total volume of potable water drawn by Sydney Water from all sources.	Yes	Yes	Yes
	Potable water drawn expressed as a percentage of yield.	Yes	Yes	Yes
	Potable water drawn expressed on a per capita basis.	Yes	Yes	Yes
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).	Yes	Yes	Yes - comparable data were provided for the previous six years, when the demand management program commenced implementation.
	Cumulative dollars expended on demand management versus cumulative demand saved.	Yes	Yes	Yes - comparable data were provided for the previous seven years, when planning for the demand management program commenced.
3 Water Leakage	Water leakage expressed as a percentage of potable water drawn.	Yes	Yes	No - comparable data were provided for only the previous six years.
4 Water Recycled	Total volume of sewage effluent reused / recycled (report volumes on-site Sydney Water premises and off-site).	Yes	Yes	No – comparable data for the previous five years were compared;



Environmental Performance Indicator	Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
	Potable water use as a percentage of total water used at each sewage treatment plant as at 2003/2004.	Yes (note that Glenfield STP was closed during the year)	Yes	Yes - comparable data were provided for the two previous years because the indicator requires comparison with the 2003/04 baseline.
	Water recycled expressed as a percentage of total sewage effluent discharged.	Yes	Yes	No – comparable data are provided for only the two previous years.
	Cumulative dollars expended on water recycling versus cumulative water recycled.	Yes	Yes	No – only one previous year of data was presented.
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	Yes	Yes	Yes
6 Sewage Treatment Plant (STP) Effluent Quality	Total mass of phosphorus discharged to streams / rivers from inland STPs.	Yes	Yes	Yes
	Total mass of nitrogen discharged to streams / rivers from inland STPs.	Yes	Yes	Yes
	Total mass of suspended solids discharged from ocean STPs.	Yes	Yes	Yes
	Total mass of grease discharged from ocean STPs.	Yes	Yes	Yes
	Suspended solids capture rate for inland STPs and ocean STPs.	Yes	Yes	No – Sydney Water stated that this indicator has not been previously monitored at STPs. Note: suspended solids capture rates at ocean STPs have been the basis for asset planning for many years.



Environmental Performance Indicator	Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
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.	Yes	Yes	No – comparable data are provided for only the previous five years.
	Total number of breaches of conditions relating to environmental impacts under licences issued by DEC for the water treatment plants.	Yes	Yes	No - comparable data were provided only for the previous five years. SWC did not explain why earlier data were not presented and for which plants historic data are available;; the Folio and Compliance report were confusing.
	Total number of prosecutions and Notices (including Penalty Notices) issued to Sydney Water under the <i>Protection of the Environment Operations Act 1997</i> .	Yes	Yes	No – comparable data provided only for previous six years.
	Total number of prosecutions and Notices (including Penalty Notices) under the <i>Protection of the Environment Operations Act 1997</i> issued to contractors engaged by Sydney Water.	Yes	No - this is the first year that Sydney Water has been required to report on this indicator.	No – this is the first year that Sydney Water has been required to report on this indicator.
8 Overflows from the Sewerage System	Total volume and total number of Controlled Sewage Overflows that occur in dry weather and in wet weather.	Yes	No – only data for 2005/06 are presented.	No - only data for 2005/06 are presented. SWC did not explain why earlier data were not presented considering the results are derived from a model



Environmental Performance Indicator	Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
	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.	Yes	No – only data for 2005/06 are presented.	No – only data for 2005/06 are presented. SWC did not explain why earlier data were not presented considering the results are derived from a model
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.	Yes	Yes However, for this indicator, Sydney Water caution about making year to year comparisons because of changing numbers of pollution control devices, changes in catchment condition, changes in frequency of cleaning and variations in rainfall.	Yes – data were compared only for the previous six years. Sydney Water advised that data prior to 1999 may not be reliable and so were not presented.
10 Recreational Water Quality	Percentage of time recreational water complied with the recreational water quality guidelines as reported by DEC's Beachwatch and Harbourwatch.	Yes	Yes	Yes, and noted that the inclusion of <i>Harbourwatch</i> data for the first time in 2005/06 significantly affected the value of the indicator compared to previous years.



Environmental Performance Indicator		Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water’s performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
Wastes and Residuals					
11	Biosolids	Total mass of biosolids produced by Sydney Water.	Yes	Yes	No – only data for the previous nine years were presented. SWC did not explain why earlier data were not presented when 10 years of data are available for the next indicator which requires “mass of biosolids produced”.
		Biosolids reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.	Yes	Yes	Yes
12	Water Treatment Residuals	Total mass of water treatment residuals produced by Sydney Water.	Yes	Yes	No – data for only the previous six years were provided.
		Water treatment residuals reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.	Yes	Yes	No – data for only the previous three years were presented.
13	Trade Waste	Total mass of heavy metals received under trade waste agreements with Sydney Water.	Yes	Yes	Yes
14	Waste	Solid waste generated by Sydney Water.	Yes	Yes	No – data for only the previous five years were provided.
		Waste recycled or reused expressed as a percentage of solid waste generated.	Yes	Yes	Yes – data were presented only for the previous five years, however, reliable data before that date are not available.
Additional Indicators					
15	Greenhouse Gases	CO2 equivalent emissions through purchase of electricity, fuel and gas.	Yes	Yes	Yes



Environmental Performance Indicator		Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
16	Electricity	Total electricity consumed by Sydney Water.	Yes	Yes	Yes
		Total electricity consumption by water assets expressed as a function of water supplied (KWh/ML of water supplied).	Yes	Yes	Yes
		Total electricity consumption by sewer assets expressed as a function of sewage treated (KWh/ML of sewage treated).	Yes	Yes	Yes
		Electricity consumption from renewable sources or generated by Sydney Water expressed as a percentage of total electricity consumption.	Yes	Yes	Yes
17	Contaminated Land	Number of sites under the control of Sydney Water that present a significant risk of harm as defined under <i>the Contaminated Land Management Act 1997</i> .	Yes	Yes	No – Sydney Water presented only five previous years of data.
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.	Yes	Yes	No – data were presented only for the previous nine years. SWC did not explain why earlier data were not presented when the Folio contains 10 years of data.
		Number of impact permits granted in relation to Aboriginal cultural heritage under the <i>National Parks and Wildlife Act</i> .	Yes	Yes	Yes – however data for only the previous five years were presented because no data exists prior to 2000.
19	Flora and Fauna	Total area of clearing of native vegetation.	Yes	No – this is the first year of reporting for this indicator.	Yes – however, only one year of data were presented as this is the first year of reporting for this indicator.



Environmental Performance Indicator		Environmental Performance Measure	Did Sydney Water monitor, record and compile data and report on the indicator	Did the report enable a year to year comparison in relation to Sydney Water's performance	Did Sydney Water compare the indicator with historical values over at least the previous 10 years where comparable data is available
		Total area of native vegetation gain due to site rehabilitation, restoration or replanting by Sydney Water.	Yes	No – this is the first year of reporting for this indicator.	Yes – however, only one year of data were presented as this is the first year of reporting for this indicator.
20	Odour	Total number of odour complaints generated from the sewage treatment plants or the sewerage system.	Yes	Yes	Yes – data were presented for only the previous two years. Sydney Water advised that as a result of the change in definition of an odour complaint, the data for 2005/06 is not comparable to previous years.
21	Noise	Total number of noise complaints generated from Sydney Water's construction or operational activities.	Yes	Yes	No – data were presented for only the previous two years. SWC did not explain why earlier data were not presented when the Folio contains data for the previous five years.



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