

Hunter Water Corporation Operational Audit 2004/2005



IPART

**INDEPENDENT PRICING AND
REGULATORY TRIBUNAL**
of New South Wales

Hunter Water Corporation

Operational Audit 2004/2005

Compliance No 21

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INDEPENDENT PRICING AND REGULATORY TRIBUNAL

OF NEW SOUTH WALES

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2 December 2005

The Hon. Carl Scully MP
Minister for Utilities
Level 36
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1 Farrer Place
SYDNEY NSW 2000

Dear Minister

Hunter Water Corporation 2004/2005 Operating Licence Compliance Audit

I am pleased to present you with the independent Operational Audit Report for Hunter Water Corporation for the period from 1 July 2004 to 30 June 2005. The Tribunal has engaged the independent Auditor in accordance with the provisions of the *Hunter Water Act 1991* and the Operating Licence.

In assessing overall compliance the Auditor found that:

"This year (2004/05) completes the third year of operation by Hunter Water under the revised Operating Licence. Hunter Water has again demonstrated its desire to perform well against the Operating Licence and this is reflected in the substantially full compliance Hunter Water achieved against the Licence requirements."

Hunter Water has demonstrated a very high level of performance against its Operating Licence. This is reflected in the Audit findings which show that the Auditors have assessed Hunter Water as having either full or high compliance with all auditable requirements.

The Tribunal notes that this is the strongest result by the Corporation against its Licence obligations for a number of years. This reflects well on Hunter Water and the capabilities of its management and staff.

The Auditor has identified a small number of areas where Hunter Water could further improve its performance. These opportunities for improvement are discussed in detail below.

Water continuity standard

Hunter Water's Operating Licence specifies basic standards of service with respect to water continuity, water pressure and sewer overflows. For water continuity, Hunter Water is required to ensure that no more than 14,000 properties in any financial year are impacted by water supply interruptions with a cumulative duration of more than five hours.

Meeting this standard has proven a difficult task for Hunter Water, as exemplified by the last three years results where the Corporation just met the requirement for 2002/03 (13,966 properties affected), breached the standard in 2003/04 (15,248 properties affected) and again just met the requirement for the current Audit period (13,723 properties affected).

Hunter Water's water supply network is long and linear in nature, with long trunk mains supplying water from relatively densely populated areas such as Newcastle to outlying areas such as Lake Macquarie, Cessnock and Port Stephens. The nature of the system means that Hunter Water is vulnerable to occasional large scale trunk main breaks, which can interrupt supply to thousands of customers at a time. Such events significantly contributed to Hunter Water's non-compliance with the water continuity standard over the previous 2003/04 Audit period.

As a result of this issue, the former Minister for Utilities imposed a number of Ministerial Requirements on Hunter Water designed to improve underlying performance against the standard. The Auditor, whilst noting that Hunter Water has fully complied with these requirements, believes these measures will take some time to demonstrate results. Despite this, the Auditor believes that there is some scope for Hunter Water to do more to improve performance against the standard. Specifically, the Auditor has made the following recommendation:

Hunter Water should further progress the installation of additional pressure / flow monitoring devices linked to its new telemetry and related information systems to enable the location of future trunk main failures to be more accurately pinpointed and so further improve its current capability to respond to mains failures more quickly to both minimise the number of customers affected and repair and return the main to service (Recommendation 7.1).

The Auditor has noted that a significant number of both planned and unplanned water supply interruptions just exceed five hours duration and are hence counted towards the Licence standard. Thus the Auditor has further recommended that:

Hunter Water should increase the awareness of its work crews as to the importance of endeavouring to reconnect customers within five hours of a discontinuity event (Recommendation 7.2).

The Tribunal endorses both recommendations and believes that you should consider making them Ministerial Requirements arising from the Audit.

Disconnection and restriction for non-payment

The Operating Licence requires Hunter Water to annually report against a suite of customer service indicators which includes the number of disconnections and restrictions for non-payment.

Disconnection involves a complete cessation of water supply to a property, whilst a flow restriction involves the insertion of a device into customer meters which greatly reduces the flow, but allows a trickle of water from customer taps to support basic drinking and hygiene activities.

The number of disconnections for non-payment made by Hunter Water has increased from a total of 5 over 2002/03 and 2003/04 to 30 in the current 2004/05 Audit period. The number of flow restrictions for non-payment also increased by approximately 57% compared to 2003/04

Hunter Water's restriction and disconnection rates are considerably higher than for Sydney Water even though Hunter Water has only around 13% of Sydney Water's customer base.

Comparison of rates of disconnection/restrictions rates between Hunter Water and Sydney Water - 2002/03 to 2004/05

		2002/03	2003/04	2004/05
Hunter Water Corporation				
Number of disconnections for non payment	Total (residential & non residential)	5	5	30
Number of restrictions for non payment	Total (residential & non residential)	703	1,009	1,582
Sydney Water Corporation				
Number of disconnections for non payment	Total (residential & non residential)	7	1	2
Number of restrictions for non payment	Total (residential & non residential)	3,375	3,256	917

The Tribunal believes that disconnection of supply particularly for residential customers (making up 25 out of the 30 properties disconnected by HWC in 2004/05) should be an absolute last resort.

Hunter Water bills the property owner, not tenants, with the result that outstanding debts are accumulated against the property. This allows Hunter Water to recover debt via deceased estates or when properties are sold. As a result, Hunter Water recovers virtually 100% of all monies owed. As such, the Tribunal questions whether such high levels of disconnection and restriction are required for effective credit management.

The Auditor notes that an occupational health and safety (OHS) issue is likely to have contributed to the increase in disconnections over 2004/05. A field worker from another water authority was electrocuted whilst working on a customer meter. The Tribunal understands that this can occur when household electrical wiring is incorrectly earthed. In response to this, Hunter Water field staff have opted to disconnect rather than restrict supply in some instances, as disconnection does not necessitate work on the meter.

The Auditor has reported that Hunter Water intends to amend work practices to ensure the protection of field staff whilst keeping disconnections to an absolute minimum. Hunter Water has also undertaken to consider ways of reducing disconnection and restriction rates.

The Tribunal is concerned about the significant number of both restrictions, disconnections and by implication the nature of Hunter Water's credit management practices. However, the Tribunal does not believe that formal Ministerial Requirements are required at this time, but will closely monitor Hunter Water's performance over 2005/06 to ensure that both disconnection and restriction rates fall to an appropriate level.

Should you have any queries about the matters raised, please do not hesitate to contact me by telephone on (02) 9290 8444.

Yours sincerely

James Cox

for Michael Keating AC
Chairman

IPART Hunter Water Corporation Operational Audit 2004/05

21 November 2005

Hunter Water Corporation



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Author: JMayo

Reviewer: JMayo

Approved by: JTheodoulou

Signed:

Date: 21 November 2005

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Information

Glossary/Definitions

General terms and definitions:

Term	Meaning
Act	<i>Hunter Water Act, 1991.</i>
Audit Period	1 st July 2004 to 30 th June 2005.
Auditor	Parsons Brinckerhoff Australia Pty Ltd
Bulk Water	Carrying the same meaning as that within the Operating Licence being water that is in a Water Storage
Commencement Date of Operating Licence	1 st July 2002
End of Term Review	A review of the Operating Licence to be undertaken on or about 1 st January 2006.
Environmental Flow	A release of water from storage so as to provide a flow of water in a river or other natural waterway that mimics natural seasonal flows and aims to restore or maintain the ecology of the waterways concerned.
Function	Means a power, authority or duty.
Minister	The Minister responsible for administering the provisions of the <i>Hunter Water Act, 1991</i> , presently the Minister for Energy and Utilities.
Operating Licence	The licence under which Hunter Water operates between 1 st July 2003 and 30 th June 2004
Water Management Licence	A Water Management Licence granted under the Water Act 1912 or the Water Management Act, 2000.

Compliance Ratings

The following compliance ratings are used to grade compliance achievement for this audit:

Grading of Compliance	Meaning
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.
Partial 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
Insufficient Information	Relevant, suitable or adequate information to make an objective determination regarding compliance was not available to the auditor.
No requirement (N/R)	The requirement to comply with this condition does not occur within the audit period or there is no requirement for Hunter Water to meet the requirement, such as a definition or a requirement placed upon another agency.

Abbreviations

Acronym	Description
Act	Hunter Water Act 1991
AOMS	Asset and Operations Management System
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AS	Australian Standard
CA	Catchment Area
CEO	Chief Executive Officer
CIS	Customer Information System
CMS	Complaints Management System
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEC	Department of Environment and Conservation (now incorporating the functions of the former EPA and former National Parks and Wildlife Service)
DIPNR	Department of Infrastructure, Planning and Natural Resources (NSW) (now incorporating the functions of the former DUAP and DLWC)
DLWC	Former Department of Land and Water Conservation (NSW)
DoH	Department of Health (NSW)
DUAP	Former Department of Urban Affairs and Planning (NSW) and Planning NSW, now DIPNR
DEUS	Department of Energy, Utilities and Sustainability
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP	Environment Plan
EPA	Former Environment Protection Authority (NSW), now part of DEC
ESD	Ecologically Sustainable Development
EWON	Energy & Water Ombudsman NSW
GIS	Geographical Information System (computer mapping)
HRC	Healthy Rivers Commission
Hunter Water	Hunter Water Corporation
HWA	Hunter Water Australia (a fully owned subsidiary of Hunter Water Corporation)
IPART	Independent Pricing and Regulatory Tribunal (NSW)
ISF	Institute for Sustainable Futures
MIB	Methyl Iso Borneol (a taste and odour component)
ML	Megalitre (1 million litres)
MOU	Memorandum of Understanding
NATA	National Analytical Testing Authority
NCC	Nature Conservation Council (NSW)
NHMRC	National Health and Medical Research Council
NHT	Natural Heritage Trust
NPWS	Former National Parks and Wildlife Service (NSW), now part of DEC
PAS	Payment Assistance Scheme
REP	Regional Environmental Plan
SCADA	Supervisory Control And Data Acquisition (instrumentation)

Acronym	Description
SEDA	Sustainable Energy Development Authority (NSW)
SEPP	State Environmental Planning Policy
SLC	Strategic Liaison Committee
WAMC	Water Administration Ministerial Corporation
WML	Water Management Licence (under the Water Act 1912)

Executive Summary

Hunter Water Corporation (Hunter Water) has achieved predominantly full compliance with the requirements of the Operating Licence in the 2004/05 audit period (1st July 2004 to 30th June 2005).

Figure A1 below provides a graphical summary¹ of Hunter Water's performance against the Operating Licence for the 2004/05 period.

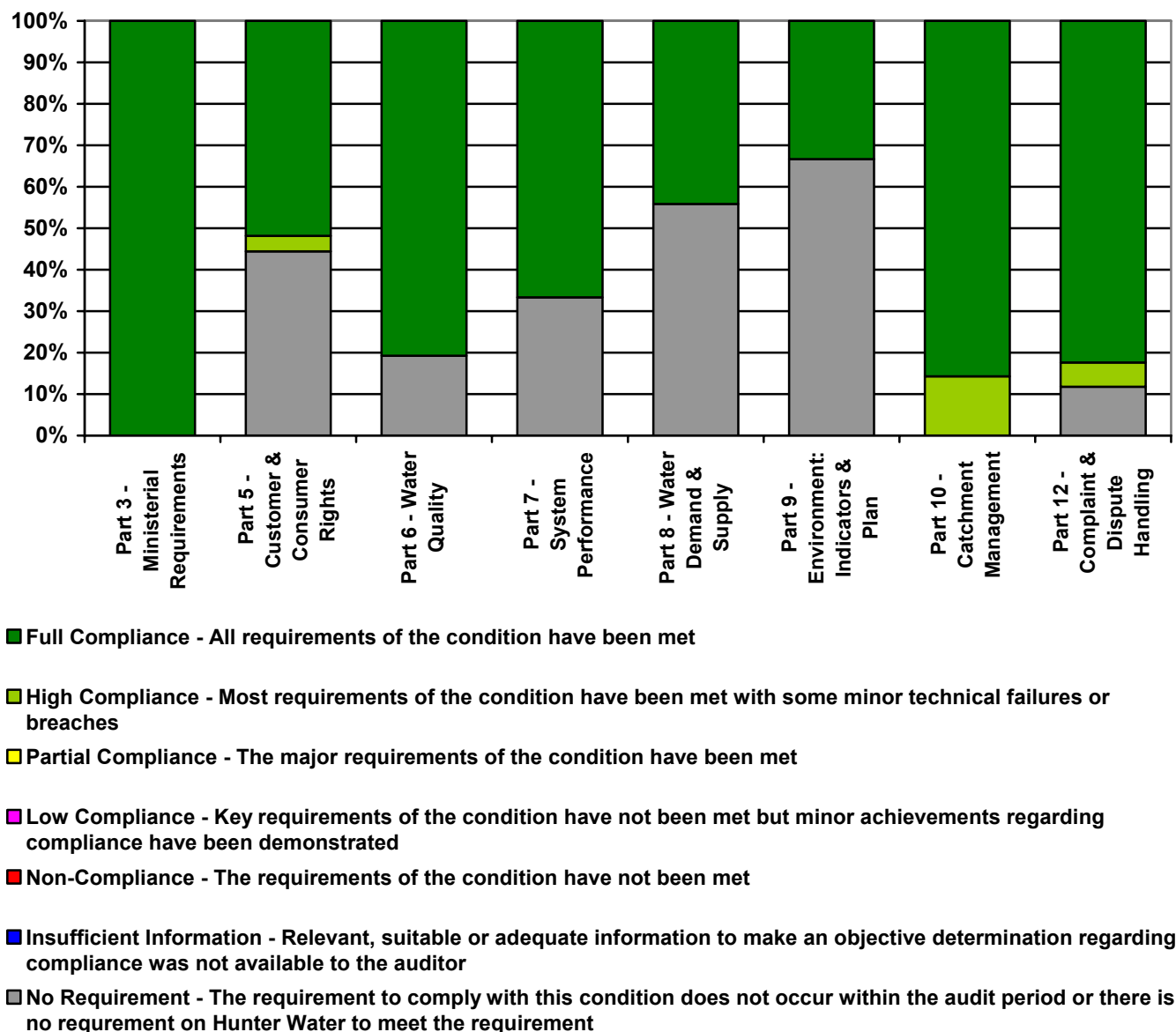


Figure A1: Overview of compliance for 2004/05 audit period

¹ Figure is indicative only.

Assessment of compliance

Ministerial requirements (Part 3)

Hunter Water has achieved full compliance with Ministerial Requirements resulting from the recommendations of the 2003/04 Audit. The commentary on Hunter Water's compliance is included in the corresponding section of the report related to that particular issue, namely Section 7.

Customer and consumer rights (Part 5)

Hunter Water has achieved full compliance (with the exception of one item for which it has achieved high compliance) with the requirements of the Operating Licence in relation to customer and consumer rights for 2004/05. Overall, while Hunter Water maintains a high standard of customer service, as found in previous audits, some suggestions have been made that should further improve the level of service Hunter Water provides to its customers.

Water quality (Part 6)

Hunter Water supplies water of excellent quality to its customers and accordingly, Hunter Water has achieved full compliance with all of its Operating Licence requirements during 2004/05.

System performance (Part 7)

Hunter Water has achieved full compliance with all of its Operating Licence requirements during 2004/05.

Minimising the number of water supply interruptions with a cumulative duration of more than 5 hours is obviously a difficult performance task for Hunter Water, exemplified by the last three year's results whereby Hunter Water has just met the requirement for 2002/03, exceeded the requirement for 2003/04 and again just met the requirement for this year, 2004/05. Hunter Water has introduced (commencing during last year's Audit period) a number of operational enhancements aimed at further improving its ability to meet the water supply continuity requirement. A number of these initiatives will take some time to demonstrate results. Irrespective, Hunter Water still needs to do more towards more consistently meeting this requirement more comfortably and accordingly some further suggestions have been made, in the form of recommendations, towards this end.

Hunter Water achieved full compliance with the Ministerial Requirements, that were related to System Performance aspects of the Licence resulting from the recommendations of the 2003/04 Audit.

Water demand and supply (Part 8)

Hunter Water has achieved full compliance with all of its Operating Licence requirements during 2004/05.

Environment - Indicators and plan (Part 9)

Hunter Water achieved full compliance with respect to the recognition of the Environmental Management Plan (EMP) in its 2004-2007 Strategic Business Plan, the establishment of targets and timeframes for environmental activities to be undertaken by Hunter Water and its availability.

Hunter Water achieved full compliance with respect to the requirements relating to monitoring and compiling data regarding its performance against the environmental and ESD indicators.

No requirement findings were identified by this audit for both sub-clauses under clause 9.3, Energy Management. In relation to Clause 9.3.1, the audit notes that a Licence amendment may be required due to the fact that the Energy Smart Business Program has now been disbanded.

Catchment management (Part 10)

Hunter Water has achieved full compliance (with the exception of one item for which it has achieved high compliance) with the requirements of the Operating Licence in relation to catchment management for 2004/05. Hunter Water achieved high compliance for the reporting of bulk water quality.

Complaints and dispute handling (Part 12)

Hunter Water has achieved full compliance (with the exception of one item for which it has achieved high compliance) in relation to all clauses of the Operating Licence associated with complaint and dispute handling. The external dispute resolution scheme managed by EWON (Energy and Water Ombudsman NSW) continues to service Hunter Water and its customers and consumers in a manner which complies with the Licence. The majority of complaints received by EWON have been satisfactorily resolved.

Strategic assessment of key issues

This year (2004/05) completes the third year of operation by Hunter Water under the revised Operating Licence. Hunter Water has again demonstrated its desire to perform well against the Operating Licence and this is reflected in the substantially full compliance Hunter Water achieved against the Licence requirements. The following key issues have been observed during the 2004/05 Audit and are presented for discussion:

Customer service and community complaints

The measurement and audit of the customer service aspects of the Operating Licence provide an insight into the level of service that Hunter Water provides to its customers. Likewise, the measurement and audit of the community complaints aspects of the Operating Licence provide an insight as to how Hunter Water's customers view Hunter Water.

Hunter Water has achieved full compliance in all but one aspect of these two Licence sections. This indicates that there is an effective relationship between Hunter Water and its community and customers, although it is considered that this relationship could be further improved in the following areas:

- *the speed and quality of resolving complaints needs to be improved further and the effectiveness of new strategies monitored in future audits*
- *with the introduction of Hunter Water's new CIS and telephony system, designed to improve Hunter water's responsiveness and recording of customer enquiries and complaints, improve the training (and the recording of training) to its personnel*

Hunter Water has an effective and useful Consultative Forum, further adding to the success of its relationship with its community and providing another avenue for input and inquiry into Hunter Water by the community. The auditors have included a recommendation aimed at further strengthening of this body by reminding its members that adequate representation of community groups is fundamental to the success of the forum.

Water quality, system performance and water supply and demand

Hunter Water supplies water of excellent quality to its customers. While Hunter Water is fortunate to have water supply sources of excellent quality, it has put in place and maintains comprehensive and robust systems and processes to ensure the delivery of high quality water to its customers.

Hunter Water has achieved full compliance with all of its system performance Operating Licence requirements during 2004/05, however minimising the number of water supply interruptions with a cumulative duration of more than 5 hours remains a challenge.

Hunter Water has achieved full compliance with all of its water supply and demand Operating Licence requirements during 2004/05.

Water losses within water supply systems have become a topical issue during the current drought conditions. Hunter Water's response to water losses has likewise come under some scrutiny. It is considered that Hunter Water's response to water losses within its water supply systems is appropriate given its comparative record of water loss to that of like Water Authorities, its particular circumstances with respect to the current and predicted ongoing availability of water and the high cost (especially when compared to the cost of the water lost) of increased investigation and or repair of relatively minor leaks in the system.

Hunter Water is also about to enter into an agreement, in the form of a Memorandum of Understanding, to jointly construct a pipeline link between Hunter Water's water supply system and that of the Central Coast. This link will allow water to be supplied in either direction depending on the respective water availability during periods of drought. While this proposed supply could be seen to adversely affect Hunter Water's ability to sustainably supply its own customers in the future, it is understood that the supply of water to the Central Coast will not be a permanent measure and will only occur during times of need by the Central Coast when, and only when, Hunter Water has adequate capacity to supply. Notwithstanding the foregoing, should Hunter Water decide to amend the current commitment and decide to supply the Central Coast in a more permanent manner, Hunter Water should be required to amend/review its Integrated Water Resources Plan.

Environment - indicators and plan

Last year's audit found that Hunter Water had achieved full compliance with all of the requirements of the Licence with the exception of the following, for which Hunter Water was found to have achieved high compliance:

- *recognising the Environmental Management Plan (EMP) in its business plans*
- *reporting trends in its performance against the environmental and ESD indicators*
- *involvement in the Energy Smart Business Program.*

At that time Hunter Water was implementing actions to address the items that were assessed as less than full compliance. As a result of these actions Hunter Water has achieved full compliance status for these same items for this year's audit.

The current and ongoing relevance of SEDA, or its successor is affecting Hunter Water's ability to meet its Licence requirement for energy management. Hunter Water advised that work with DEUS to establish rational energy savings targets is currently on hold following the cessation of the Energy Smart Business Program and pending clarification of the requirements for Hunter Water of the new Energy Administration Amendment (Water and Energy Savings) Act 2005.

In the interim, Hunter Water will continue to seek justifiable energy saving initiatives and is currently working with its major energy supplier Country Energy and a number of energy management consultants to identify further sources of savings.

Catchment management

Hunter Water uses catchment management as one of the tools in its 'multi-barrier' approach to the maintenance of water quality. Hunter Water's multi-barrier approach includes:

- *regular monitoring of water quality at the source;*
- *maintenance of a closed water distribution system;*
- *a high level of water treatment; and*
- *working with the community and other stakeholders to help protect the quality of natural water sources (i.e. catchment management).*

Hunter Water participates and interacts with a number of organisations/ stakeholders that together can have an influence on the quality of raw water (catchment water yields) that make up Hunter Water's water supply to customers. However, Hunter Water has limited power to manage activities within its catchments, in many cases its ability to influence development within the drinking water catchments is advisory only.

With high levels of growth in the Hunter region, Hunter Water needs to continue to work closely with the Department of Planning and Port Stevens Council to ensure that future development does not pose a significant risk to water quality within Hunter Water's area of operations.

Regardless of the foregoing, Hunter Water has some capacity to directly influence its catchments. Suggestions towards maximising Hunter Water's influence towards catchment matters include:

- *Proactively leading catchment management initiatives.*
- *Gaining increased knowledge landuse patterns and landuse activities within its catchment areas and so better understand the correlation between landuses, catchment health and resulting water quality.*
- *Continuing to work closely with local governments and stakeholders to develop agreements and mechanisms that ensure Hunter Water has a formalised advisory role in decisions that relate to development within its catchment/special areas.*

Resolution of non-compliances from previous audits

Hunter Water has demonstrated its willingness and eagerness to maintain high levels of compliance with the Operating Licence through active responses to the resolution of matters that did not receive full compliance during the previous audit year.

Comparison of Hunter Water's compliance with the previous audit

*This section summarises the compliance achieved by Hunter Water in the 2004/05 audit period compared to compliance levels attained for the previous audit periods. For brevity the audit clauses have been summarised but full descriptions are provided in a copy of the Operating Licence provided in **Appendix B**. **Table A2** provides a summarised comparison of each requirement of the Operating Licence covered by this audit (for 2004/05) and for the audits completed for 2002/03 and 2003/04.*

*Key observations from **Table A2** are that:*

- *Overall Hunter Water maintains levels of high or full compliance against a majority of audit clauses with minimal change in Hunter Water's overall compliance from year to year based on an assessment across all audit areas.*
- *Areas that are identified as deficient in a previous year appear to have been targeted to achieve a higher level of compliance in the following year. In this Hunter Water has been successful; its overall compliance for this year is higher than for previous years.*
- *Annual fluctuations for single clauses are difficult to associate with any meaningful trend analysis unless these are associated with multiple deficiencies within an audit area. These fluctuations typically reflect Hunter Water's annual assignment of resources and priorities that are a reality of managing the organisation.*
- *Some variability across years can also be associated with variations in the level of detail to which a particular clause is queried during the audit and may also arise from varying climatic conditions that affect performance.*
- *In some instances, trends cannot be interpreted as the audit clause seeks to establish something in the first year that has no requirements for ongoing input. This is particularly notable for documentation such as the Customer Contract and Environmental Management Plan.*

Table A2: Summary of compliance

Clause	Requirement	2002/03 ²	2003/04	2004/05
Part 5	Customer and Consumer Rights			
5.1.	Customer Contract			
5.1.1	The Customer Contract – rights and obligations	N/R	N/R	N/R
5.1.2	Applicability of the Customer Contract	N/R	N/R	N/R
5.1.3	Customer Contract posted on Hunter Water's website	Full	Full	Full
5.1.4	The Customer Contract may only be varied in accordance with the Act	Full	Full	N/R
5.1.5	Review of the Customer Contract	N/R	N/R	N/R
5.1.6	Contract review must have regard to system performance standards	N/R	N/R	N/R
5.1.7	Findings and recommendations of the review to be provided to the Minister	N/R	N/R	N/R
5.1.8	Hunter Water to issue a new Customer Contract that addresses the recommendations of the review report	N/R	Full	N/R
5.1.9	Hunter Water must prepare a summary pamphlet of the Customer Contract within 3 months of review	N/R	Full	N/R
5.1.10	The pamphlet to be posted on Hunter Water's website, with the Rental Bond Board for collection, sent with bills to Customers and otherwise provided on request	N/R	High	Full
5.1.11	Hunter Water to enter into other contracts or arrangements for the supply of Services	N/R	N/R	N/R
5.2.	Consumers			
5.2.1	Fulfilment of obligations under the Customer Contract relating to complaint handling and complaint resolution	N/R	Full	Full
5.2.2	Fulfilment of obligations under the Customer Contract relating to debt and disconnection procedures	N/R	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
5.3	Code of Practice and Procedure on Debt and Disconnection			
5.3.1	Development of code of practice and procedure on debt and disconnection	N/R	N/R	N/R
5.3.2	Provision within the Code of Practice for deferred payment or payment by instalment options for charges; and advice within bills on payment options	Full	Full	High
5.3.3	Rights and obligations in the Code are incorporated into the Customer Contract	Full	Full	Full
5.3.4	Information on the Code of Practice disseminated via the Rental Bond Board for collection, sent with bills to Customers and otherwise provided on request	Full	High	Full
5.4.	Consultative Forum			
5.4.1	Establishment of Consultative Forum	Full	Full	Full
5.4.2	Using the Forum consistent with the Consultative Forum Charter	N/R	Full	Full
5.4.3	A Consultative Forum must be established within 6 months of the Commencement date.	Full	N/R	N/R
5.4.4	Forum and its membership prior to commencement date	N/R	Full	Full
5.4.5	Hunter Water must at all times appoint the members of the Consultative Forum.	Full	Full	Full
5.4.6	Representing the community in membership of the Consultative Forum	Full	Full	Full
5.4.7	Development of a Consultative Forum Charter	Full	Full	Full
5.4.8	Hunter Water providing information to the Consultative Forum	N/R	Full	Full
5.4.9	Availability of the Consultative Forum Charter to the public	Full	Full	Full
5.4.10	Reporting on operations of Consultative Forum and the development of the Consultative Forum Charter.	Full	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
5.4.11	Evaluation and reporting on effectiveness of the Consultative Forum and compliance with the Consultative Forum Charter.	N/R	N/R	N/R
Part 6	Water Quality			
6.2.	Drinking Water Quality – Standards			
6.2.1	Hunter Water must comply with the NHMRC and ARMCANZ Drinking water guidelines	Full	Full	Full
6.2.2	Inconsistencies between the Health Guideline and Drinking water Guidelines	N/R	N/R	N/R
6.2.3	Regard for the concepts of risk minimisation practices and system management of public water supplies.	Full	Full	Full
6.2.4	pH levels in cement mortar lined pipes to be in the range 6.5 – 9.2	Full	Full	Full
6.3.	Drinking Water Quality – Monitoring			
6.3.1	Prepare an Annual Comprehensive Water Quality Monitoring Plan by 30 April each year	Full	Full	Full
6.3.2	The Monitoring Plan must include monitoring of drinking water, health and bulk water parameters, as required by NSW Health	Full	Full	Full
6.3.3	The sampling frequency and the locations chosen for the monitoring should be representative of water quality	Full	Full	Full
6.3.4	Undertake Drinking water quality monitoring	Full	Full	Full
6.3.5	Monitor at the property boundary where the Drinking water guidelines recommend monitoring at a Customer's or Consumer's tap	N/R	Full	Full
6.4.	Drinking Water Quality – Reporting			
6.4.1	Monthly summary of Hunter Water's water quality monitoring results to be made available to the Public	Full	Full	Full
6.4.2	Produce Annual Water Quality Report comparing actual Drinking water quality against the Drinking water guidelines	Full	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
6.4.3	The Annual Water Quality Report must include a monitoring summary, water quality trends and problems, a summary of system failures and action taken	Full	Full	Full
6.4.4	The Annual Water Quality Report must be prepared by 30 November each year and be made freely available to the Public	Full	Full	Full
6.5.	Drinking Water Quality - Planning			
6.5.1	Hunter Water must maintain, a Five-Year Water Quality Management Plan.	Full	Full	N/R
6.5.2	Five-Year Water Quality Management Plan to include comprehensive management strategies to ensure that Drinking water quality supplied to customers and consumers complies with clause 6.2.1	Full	Full	N/R
6.5.3	Hunter Water must prepare, an Annual Water Quality Improvement Plan for the Water supply system by 31 March each year	Full	Full	Full
6.5.4	The Annual Water Quality Improvement Plan must incorporate changes needed to address problems identified through water quality monitoring data	Full	Full	Full
6.5.5	The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Licence	N/R	N/R	N/R
6.5.6	Hunter Water must assess the risks of failing to comply with clause 6.2, in relation to Drinking water	Full	Full	Full
6.5.7	Maintaining an Incident Management Plan	Full	Full	Full
6.5.8	Incident Management Plan to contain procedures and protocols for the coordinated management of Drinking water incidents.	Full	Full	Full
6.6.	Other Grades of Water			
6.6.1	Other Grades of water supplied must be supplied according to relevant guidelines and requirements	Full	Full	Full
6.6.2	The Minister's decision will prevail where there is a conflict between any of the guidelines, requirements or standards	N/R	N/R	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
6.6.3	Hunter Water must use its best endeavours to reach agreement with persons to whom Other Grades of water is supplied.	Full	Full	Full
6.6.4	Hunter Water must advise persons to whom Other Grades of water is supplied, of the potential uses for the Other Grades of water and of Water treatment	Full	Full	Full
6.7.	Environmental Water Quality			
6.7.1	Reporting performance against any environmental water quality requirements for any discharges or water releases required by Licences	Full	Full	Full
Part 7	System Performance			
7.2.	Interpretation			
Commencement and cessation of a Water interruption				
7.2.1	Water Interruption incidents as defined by Hunter Water and relevant authorities.	N/R	N/R	N/R
Commencement and cessation of a Pressure incident				
7.2.2	Application of Clause 7.2.1 (a) and (c) to Pressure incidents	N/R	N/R	N/R
Commencement and Cessation of Sewage overflows				
7.2.3	Application of Clause 7.2.1 (a) and (c) to Uncontrolled sewage overflow	N/R	N/R	N/R
7.3.	System Performance Standards			
Water Continuity Standard				
7.3.1	Hunter Water must ensure that no more than 14,000 Properties in a year experience Water interruptions of greater than 5 hours (cumulative)	Full	Non	Full
Water Pressure Standard				
7.3.2	No more than 4,800 Properties in a year experience one or more pressure incidents	Full	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
Sewage Overflows Standard				
7.3.3	Hunter Water must ensure that the number of Uncontrolled sewage overflows does not exceed 6,500.	Full	Full	Full
7.4	Reporting on system performance			
Reporting on Water Interruptions				
7.4.1	Hunter Water must report on the number of Properties that experience a water interruption	Full	Full	Full
Reporting on Water Pressure				
7.4.2	Report on the number of Properties that experience one or more Pressure incidents	Full	Full	Full
Reporting on Sewage Overflows				
7.4.3	Report on the number of Uncontrolled sewage overflows in dry weather or wet weather	Full	Full	Full
Publication of Reports				
7.4.4	Reports must be made freely available to the Public.	Full	Full	Full
7.5	System Performance Indicators			
7.5.1	Schedule 4 applies	Full	N/R	N/R
7.5.2	Report performance against the system performance indicators in Schedule 4 and make publicly available	Full	Full	Full
7.6	Keeping of Records on Water Interruptions, Low Pressure and Sewage Overflows			
7.6.1	Maintain records necessary to meet Licence obligations and Schedule 4	Full	Full	Full
7.6.2	Maintain records of Water interruptions, Pressure incidents and Sewage overflows	Full	Full	Full
7.7.	Report on Low Pressure Areas			
7.7.1	Within six months of the Commencement date, Hunter Water must report to IPART on water pressure that is less than 20 metres head	Full	N/R	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
Part 8	Water Demand and Supply			
8.2.	Interpretation			
8.2.1	Definition describing references to options developed under the integrated water resources plan	N/R	N/R	N/R
8.3.	Integrated Water Resources Plan Development of the Plan			
8.3.1	Develop an Integrated Water Resources Plan.	Full	Full	N/R
8.3.2	Develop a draft of the Plan by 30 September 2002, and make available to the Public for 28 days.	Full	Full	N/R
8.3.3	Must engage in Public consultation complete the Plan by 1 March 2003.	Full	Full	N/R
8.3.4	The Plan must be made freely available the Public	Full	Full	Full
8.3.5	Regularly review the Plan	Full	N/R	N/R
8.3.6	Report any amendments	Full	Full	Full
8.3.7	When developing or reviewing the Plan apply relevant best practice research and endeavour to continually refine and renew methodologies to reflect current best practice.	N/R	Full	Full
8.3.8	IPART must evaluate and report on the outcomes achieved by the Plan.	N/R	N/R	N/R
Content and Methodology of the Plan				
8.3.9	The Plan must enable Hunter Water to respond to water needs in the Area of Operations	Full	Full	N/R
8.3.10	The Plan must indicate management of supply augmentation, real losses of water and demand for water within its Area of Operations over the next 10 years	Full	Full	N/R
8.3.11	The Plan must quantify the maximum reliable quantity of water that can be derived from one year to the next, from its existing Water storages	Full	Full	N/R
8.3.12	The Plan must make projections of the total demand for water	Full	Full	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
8.3.13	Hunter Water must utilise Present value calculations	Full	Full	N/R
Identifying the Options and Associated Costs				
8.3.14	The Plan must identify and evaluate all reasonably practicable options to manage demand and supply of water and must list the non-financial advantages and disadvantages of each option.	Full	Full	N/R
8.3.15	In evaluating the options identified under clause 8.3.14 Hunter Water must take all necessary steps to ensure that the Plan; quantifies the estimated costs of each option identified, and compares the financial, social and environmental costs of each option.	Full	Full	N/R
8.3.16	If unable reasonably to quantify the social and environmental costs of the options, quantify social and environmental costs as able and provide a description of those unable to be quantified.	Full	Full	N/R
8.3.17	Adopt the least cost option determined under clause 8.3.15 unless there are reasonable and substantive reasons for adopting a different option	Full	Full	N/R
Results of the Plan				
8.3.18	Outline targets, standards, indicators or other proposals for consideration as part of the Licence review	Full	Full	N/R
Annual Reporting on the Plan				
8.3.19	Report performance against the Plan.	Full	Full	Full
8.4.	Water Conservation Target			
8.4.1	Calculation of the five year rolling average for annual residential water consumption	Full	Full	Full
8.4.2	Report compliance with Water conservation target.	Full	Full	Full
8.4.3	Comply with conservation target until replaced	Full	Full	Full
8.5.	Water Demand and Supply Indicators			
Security of Supply				
8.5.1	Impose Water restrictions only as approved by the Minister	Full	N/R	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
8.5.2	Reporting on Water restrictions imposed in a Reporting period	N/R	N/R	N/R
8.5.3	Report on water restriction criteria	N/R	N/R	N/R
8.5.4	Report on the quantity of water supplied from each Water storage	Full	Full	Full
Losses from the Water System				
8.5.5	Report against each component in the Water balance table consistent	Full	Full	Full
8.5.6	Reporting differences in the outcomes in applying clause 8.5.5 between Reporting periods	Full	Full	Full
Recycled Water				
8.5.7	Report on the quantity of Recycled water supplied in a Reporting period for all applications	Full	Full	Full
Demand Management				
8.5.8	Report on the total quantity of water supplied for all customers	Full	Full	Full
8.5.9	Comparing applications in 8.5.8, with the preceding Reporting period, and indicate factors contributing to change	Full	Full	Full
8.6.	Annual Reporting on Water Demand and Supply Indicators			
8.6.1	Report performance against the water demand and supply indicators	Full	Full	Full
8.6.2	Publicly display the report	Full	Full	Full
Part 9	Environment – Indicators and Plan			
9.1.	Environmental Management Plan			
9.1.1	Hunter Water must produce a five-year Environmental Management Plan (EMP) within three months of the Commencement date and update the EMP every five years.	Full	N/R	N/R
9.1.2	Hunter Water must engage in public consultation in developing the EMP.	Full	N/R	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
9.1.3	The EMP must contain details of Hunter Water's environmental improvement strategies and objectives, endorse ESD principles and be recognised in Hunter Water's business plans.	Full	High	Full
9.1.4	The EMP must set targets and timetables for environmental activities to be undertaken by Hunter Water, utilising its environmental and ESD indicators.	Full	Full	Full
9.1.5	Material amendments may only be made to the EMP following public consultation.	Full	N/R	N/R
9.1.6	Hunter Water must report on any material amendments made to the EMP	Full	N/R	N/R
9.1.7	The EMP must be provided to IPART on its completion and posted on Hunter Water's website, made available at its Customer centres and lodged with public libraries.	Full	Full	Full
9.2.	Environmental and ESD Indicators			
9.2.1	Hunter Water must monitor and compile data on indicators of the direct impact of its activities on the environment and the extent to which its services comply with the principles of ESD.	Full	Full	Full
9.2.2	Hunter Water must develop a draft list of environmental and ESD indicators within three months of the Commencement date.	Full	N/R	N/R
9.2.3	In developing the environmental and ESD indicators, Hunter Water must have regard to the Commonwealth State of the Environment Reporting system and the 'Australia: State of the Environment Environmental Indicator Report' series.	Full	N/R	N/R
9.2.4	The environmental and ESD indicators developed by Hunter Water must be consistent with the scope and objectives of the EMP.	Full	N/R	N/R
9.2.5	The draft list of environmental and ESD indicators developed by Hunter Water must undergo public consultation.	Full	N/R	N/R

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
9.2.6	Within three months of the close of submissions, following public consultation, Hunter Water must present a final list of environmental and ESD indicators to the Minister for approval.	Full	N/R	N/R
9.2.7	Hunter Water must commence monitoring and compiling data on the environmental and ESD indicators from the date of approval by the Minister.	Full	N/R	Full
9.2.8	Hunter Water must report its performance against its environmental and ESD indicators in its annual environment report. The report must specify trends to allow comparison with previous results.	Full	High	Full
9.2.9	The environmental and ESD indicators must be reviewed as part of the Licence review.	Full	N/R	N/R
9.3.	Energy Management			
9.3.1	Hunter Water must participate in the Energy Smart Business Program, or similar program administered by SEDA.	Full	High	N/R
9.3.2	Hunter Water must report on any actions or activities undertaken by Hunter Water as part of the Energy Smart Business Program and any other energy management or green power initiatives.	Full	Full	N/R
Part 10	Catchment Management			
10.1.	Catchment Report			
10.1.1	Report performance in the Catchment Report	Partial	Full	Full
10.1.1a	Report against bulk water quality parameters	Full	High	High
10.1.1b	Report details of activities under the Hunter Water Corporation Limited (Special Areas) Regulation 1997, Williams River Catchment Regional Environment Plan, Regional Planning Strategy and Seaham Weir Operations Plan	Full	High	Full
10.1.1c	Report details of performance against the Water Management Licence and the Dam Safety Act 1978	Full	High	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
10.1.1d	Report against other catchment, landcare and supporting activities by or on behalf of Hunter Water	Full	High	Full
10.1.1e	Report against five year trends observed in the Williams River across five specified key water quality indicators	Partial	Full	Full
10.1.2	Publicly display the Catchment Report on its website for free download and make it available at its premises for access or collection by the public free of charge.	Full	Full	Full
Part 12	Complaint and Dispute Handling			
12.1.	Internal Complaint Handling Procedures			
12.1.1	Establish internal complaints handling procedures	Full	Full	Full
12.1.2	The internal complaints handling procedures must be based on the Australian Standard AS4269- 1995 Complaint Handling.	Full	Full	Full
12.1.3	Hunter Water must make available to Customers and Consumers information concerning its internal complaints handling procedures	Full	Full	Full
12.1.4	Hunter Water must provide information about making complaints in bills at least once each year.	Full	Full	Full
12.1.5	The Customer complaint handling, complaint resolution process and Customer redress provided to Customers under the Customer Contract must be reviewed and amended where necessary by Hunter Water to ensure that it is based on the Australian Standard AS4269-1995 Complaint Handling.	Full	High	High
12.1.6	Reporting on details concerning complaints made against Hunter Water to IPART	Full	Full	Full
12.2.	External Dispute Resolution Scheme			
12.2.1	Establishment of a Dispute Resolution Scheme	Full	N/R	N/R
12.2.2	The Dispute Resolution Scheme so established by Hunter Water is subject to the Minister's approval.	Full	N/R	N/R
12.2.3	Issues for complaints made to the Dispute Resolution Body	Full	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Clause	Requirement	2002/03 ²	2003/04	2004/05
12.2.4	The Dispute Resolution Scheme must comply with the minimum standards	Full	Full	Full
12.2.5	Features of the Dispute Resolution Scheme	Full	Full	Full
12.2.6	Pamphlet explaining how the Dispute Resolution Scheme operates and how it can be accessed.	Full	Full	Full
12.2.7	Hunter Water must provide the pamphlet to Customers and Consumers through their bills at least once each year.	Full	Full	Full
12.2.8	Hunter Water must provide IPART with written reports of the determinations made by the Dispute Resolution Body. Confidentiality arrangements are to be made so as not to disclose the Customer or Consumer's identity in such reports.	Full	Full	Full
12.2.9	Contents of report on Dispute Resolution Body by Hunter Water	Full	Full	Full
12.2.10	Public display of the report	Full	Full	Full
12.3	Complaints to other bodies			
12.3.1	Hunter Water must report on complaints made against Hunter Water to a court or tribunal	Full	Full	Full

². Direct comparisons against each sub-clause cannot always be made between 2002/03 and 2003/04 audit reports because the 2002/03 Audit report only provided assessments based on an amalgamation of several audit clauses. Assessments undertaken for 2003/04 look at each sub-clause (where relevant). The intent of the table is to interpret a consistent compliance assessment from each clause for the 2002/03 audit for the purposes of comparison.

Summary of key recommendations

The following section summarises the key recommendations arising from each chapter of the Operating Licence.

The key recommendations address shortfalls identified in the audit and are intended to assist Hunter Water in achieving more thorough compliance with the terms of the Operating Licence in future audits.

In addition to these key recommendations, each audit chapter of this report may also contain secondary recommendations, not presented below, that are intended to provide information and points of action to Hunter Water to achieve ongoing continuous performance improvement. It should be recognised that Hunter Water's achievement against the secondary recommendations will also contribute to stronger consistency with the terms of the Operating Licence.

Ministerial requirements (Part 3)

No recommendations are made concerning the Ministerial Requirements resulting from the 2003/04 Audit.

Customer and consumer rights (Part 5)

- R5.1** *It is recommended that Hunter Water modify the wording in the Code of practice for debt and disconnection to include the requirements of Clause 5.3.2(b).*
- R5.2** *It is recommended that Hunter Water remind members of the Consultative Forum that adequate representation of community groups is fundamental to the success of the forum and compliance with the Operating Licence. Hunter Water should ensure members are aware that a substitute representative may attend when the nominated member is unable to attend given that the organisations represented form the membership of the Forum rather than the individual members themselves.*
- R5.3** *It is recommended that Hunter Water determine ways of assessing the effectiveness of the Consultative Forum and how this might be demonstrated, in preparation for the 2006 Licence Review as detailed in Clause 5.4.11.*

Water quality (Part 6)

No recommendations are made concerning this part of the Operating Licence.

System performance (Part 7)

While Hunter Water has made some progress with the installation of additional flow/pressure monitoring devices throughout its system, it needs to progress with the installation of more devices.

- R7.1** *It is recommended that Hunter Water should further progress the installation of additional pressure/flow monitoring devices linked to its new telemetry/ SCADA system to enable the location of future trunk main failures to be more accurately pinpointed and so further improve its current capability to respond to mains bursts more quickly to:*
- *minimise the number of customers affected by the failure by means of appropriately shutting down the trunk main and/or supplying customers from other sources*
 - *repair the failure/burst*
 - *return the trunk main to service, resupplying customers affected.*

Hunter Water has also recognised that a significant number of planned shutdowns just fail to meet the maximum 5 hour criterion and so add to the total number of interruptions that exceed 5 hours. Hunter Water has identified that work practices within its day-labour crews undertaking the watermain repairs could be improved along with the time management of the works being undertaken.

- R7.2** *It is recommended that Hunter Water should increase the ongoing level of training of its day-labour crews, to increase its crews awareness of the importance of the timeliness of reconnecting customers following a discontinuity event and increase its overall time management of discontinuity events.*

Water demand and supply (part 8)

- R8.1** *It is recommended that should the commitment to supply the Central Coast transition into a supply requirement that is more permanent in nature, that Hunter Water be required to amend/review its Integrated Water Resources Plan.*

Environment - indicators and plan (part 9)

No recommendations are made concerning this part of the Operating Licence.

Catchment management (part 10)

A key recommendation of the 2003/04 Audit Report was that Hunter Water should provide greater explanation for the causes and implications of five-year and long-term water quality trends. The 2004/05 Catchment Report provides explanation for some water quality trends, although most are not included. The report does not discuss the implications of these trends on catchment health or bulk water quality.

- R10.2** *It is recommended that Hunter Water provide a consistent explanation of all statistically significant water quality trends in future Catchment Reports. If the causes of such trends are unknown, this should be stated.*

Complaints and dispute handling (part 12)

- R12.1** *It is recommended that Hunter Water records, in a manner suitable for reporting purposes, training of customer service staff for each audit year.*

1. Introduction and Objectives

In accordance with the Hunter Water Act 1991, the NSW Government has granted an Operating Licence to Hunter Water. The objective of this Licence is to enable and require Hunter Water to lawfully provide services, including water, sewerage and drainage services, within its area of operations. This Licence is for a term of five (5) years, from 2002 to 2007, and commenced on 1 July 2002.

A requirement of the Operating Licence is that an annual Operational Audit of Hunter Water's performance against its obligations under the Licence be undertaken. The Independent Pricing and Regulatory Tribunal (IPART) is required to conduct this annual Operational Audit and has engaged Parsons Brinckerhoff Australia Pty Ltd (PB) to fulfil this requirement on its behalf for the period of 2004/05. The audit brief for this engagement is provided in **Appendix A**.

Information collected during Operational Audits is ultimately utilised for reporting on Hunter Water's performance in relation to its Operating Licence. This information is utilised by IPART to make recommendations to the Minister for Energy and Utilities regarding:

- the granting, amendment or cancellation of the Operating Licence
- the imposition, amendment or cancellation of conditions in relation to the Operating Licence
- action to be taken, and sanctions to be applied, in respect of a contravention of the Operating Licence
- remedial action that may be warranted as a result of a contravention of the Operating Licence.

1.1 Hunter Water Corporation

Hunter Water is a statutory state owned corporation established under the *State Owned Corporations Act* 1989. Hunter Water's shareholders are the NSW Treasurer and Minister for Energy and Utilities. The corporation is governed by a Board of Directors. Hunter Water is regulated by several state government bodies as outlined below:

- The NSW Government, which grants Hunter Water's Operating Licence under the *Hunter Water Act* 1991.
- The Independent Pricing and Regulatory Tribunal (IPART), which recommends the conditions of the Operating Licence to the NSW Government, conducts periodic audits of performance against the Operating Licence and sets Hunter Water's prices for providing services.
- The Department of Infrastructure, Planning and Natural Resources (DIPNR), which administers Hunter Water's Water Management Licence granted under the *Water Act* 1912, allowing sustainable access and use of water resources.

- The Department of Environment and Conservation, which licences Hunter Water's wastewater systems under the *Protection of the Environment Operations Act 1997*.
- NSW Health, which, as required by the Operating Licence, Hunter Water has entered into a Memorandum of Understanding to describe the roles and responsibilities of the two organisations and facilitate effective interaction between them.
- The inter-relationship between Hunter Water and other connected organisations and stakeholders is shown below in **Figure 1.1**.

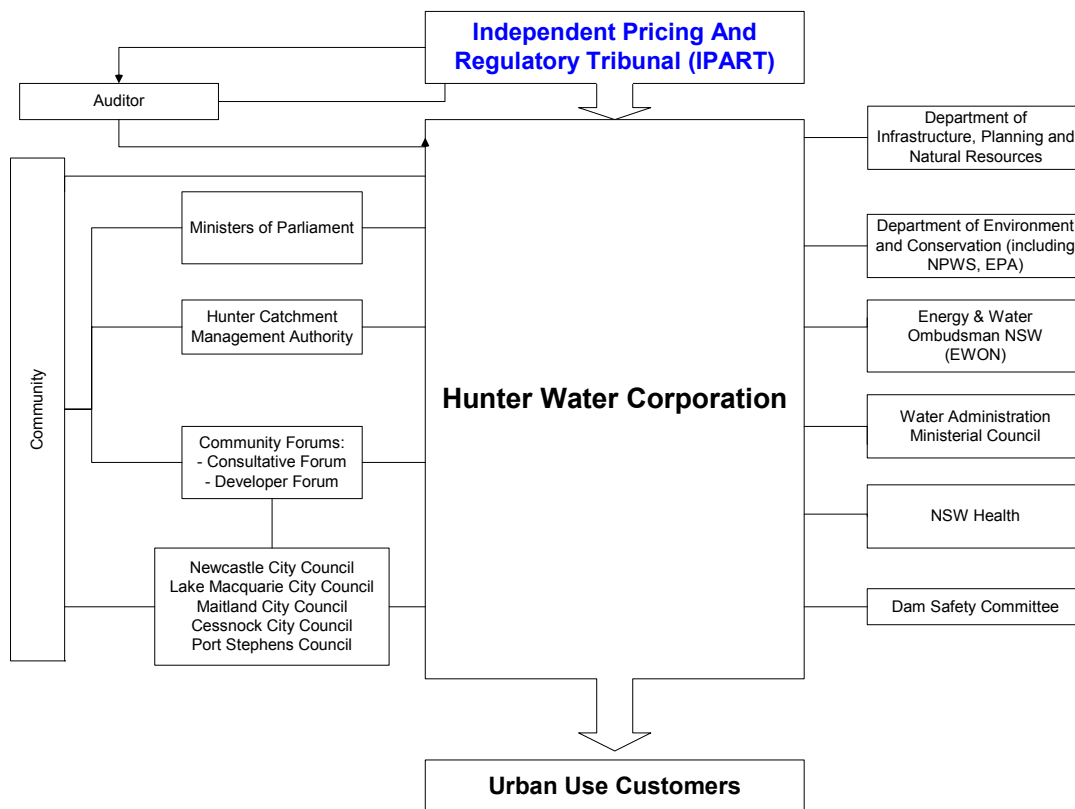
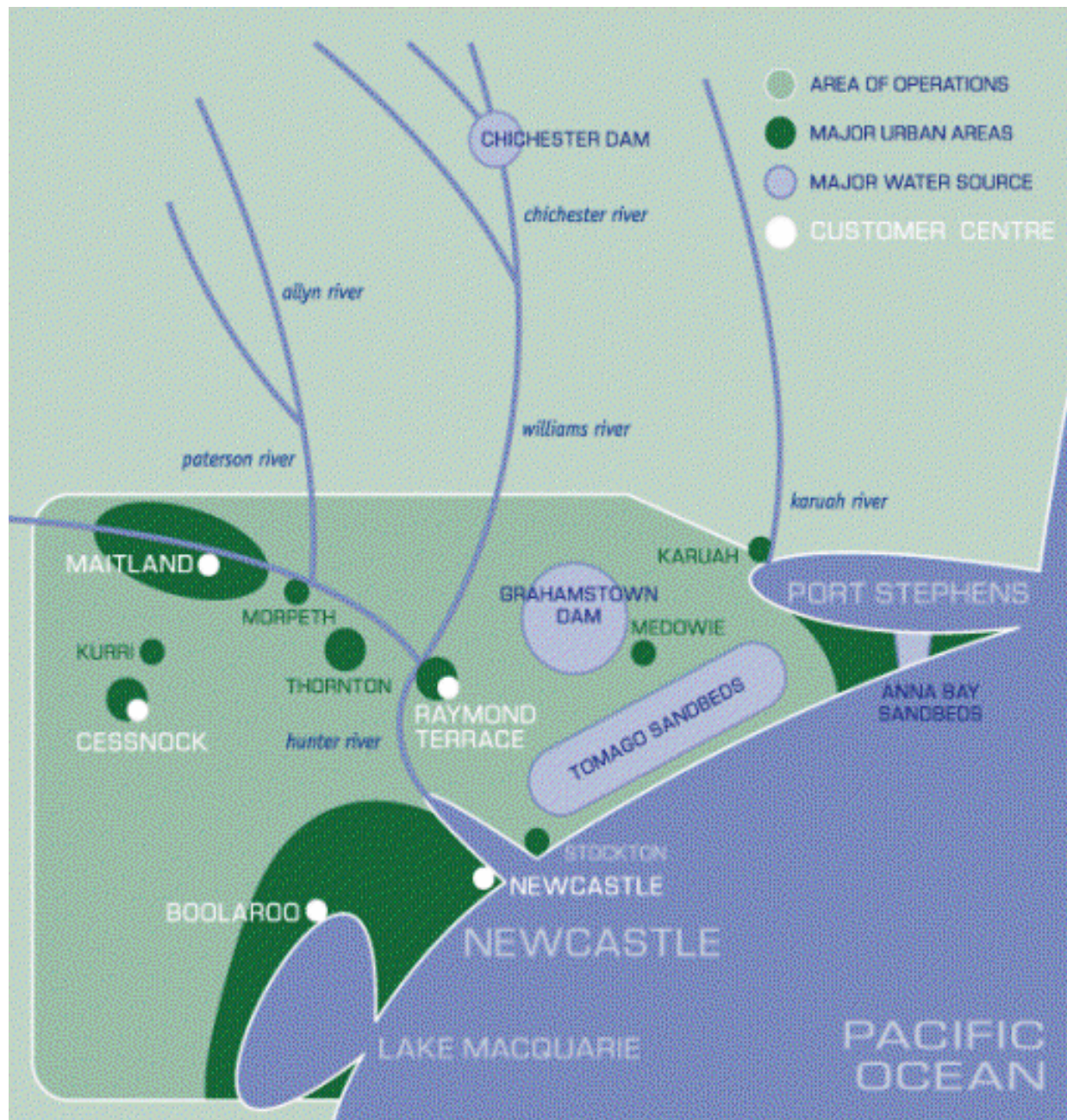


Figure 1.1: Inter-organisational structure – Hunter Water

Hunter Water provides water and wastewater services to almost half-a-million people residing in the Newcastle, Lake Macquarie, Maitland, Cessnock and Port Stephens areas. An outline of Hunter Water's water supply network, including the area of operations for which Hunter Water is responsible, is shown in Figure 1.2. The services provided by Hunter Water are delivered under the Operating Licence noted above. The licence specifies the minimum standards of service that must be met in relation to drinking-water quality, water pressure, water continuity, and sewer surcharges and requires Hunter Water to report against performance of its Environmental Management Plan (EMP) and the Integrated Water Resources Plan (IWRP). Wastewater treatment performance is specified under Operating Licences issued and managed by DEC.



Source: Hunter Water Corporation, 2004

Figure 1.2: Hunter Water's water supply network

1.2 Independent Pricing and Regulatory Tribunal

The *Independent Pricing and Regulatory Tribunal and Other Legislation Amendment Act* entered into force on 1 November 2000. Under Schedule 1 of this Act the Operational Audit function of the Licence Regulator has been transferred to the Independent Pricing and Regulatory Tribunal (IPART).

1.3 Scope of operational audit

This is the third audit of Hunter Water against the requirements of the current Operating Licence. The audit covers the period from 1st July 2004 to 30th June 2005.

The objective of the Operational Audit is to report to and advise IPART on Hunter Water's performance with regards to its Operating Licence for the audit period. Components of the Operational Audit included:

- review, assessment and reporting on the level of compliance achieved by Hunter Water against the Operating Licence.
- assessment and reporting on progress by Hunter Water in implementing the Ministerial Requirements set subsequent to the previous Operational Audit
- identification of any factors that affected Hunter Water's performance for the period from 1 July 2004 to 30 June 2005
- based upon the audit assessment and components described above, recommendations resulting from this audit have been made regarding ways in which Hunter Water can improve its performance in the future.

The detailed scope for the Operational Audit is described in Part 11 of the Operating Licence, which is provided in **Appendix B**. The scope includes investigation and reporting on Hunter Water's compliance with its obligations as set out in the specific Parts of the Licence as listed in **Table 1.1** below.

Table 1.1: Scope of the audit

Licence part		General requirements	Report section
Part 3	Ministerial Requirements	Requirements defined by the Minister of Energy and Utilities to be addressed in the audit period.	Chapter 4
Part 5	Customer and Consumer Rights	Including: customer contract, consumers, code of practice on debt and disconnection, the consultative forum and customer service indicators	Chapter 5
Part 6	Water Quality	Including: health and aesthetic drinking water quality; risk minimisation of public water supplies; representative monitoring, sampling and testing of drinking water; reporting on drinking water quality including assessments of trends and problems; water quality planning via the Five Year Water Quality Management Plan, an Annual Water Quality Improvement Plan and an Incident Management Plan; provision of other grades of waters to other customers; and environmental water quality.	Chapter 6

Licence part		General requirements	Report section
Part 7	System Performance	Including: prevention, reporting and maintaining records of water interruptions, prevention and reporting, reporting of performance and maintaining records of pressure incidents and sewage overflows; reporting of performance on water interruptions and on low pressure areas.	Chapter 7
Part 8	Water Demand and Supply	Including: development of an Integrated Water Resources Plan; review of the IWRP with respect to best practice; matters for inclusion in the content of the IWRP and the methodology of its preparation and review; consideration of available options and cost implications for water supply and demand; reporting performance against the IWRP; reporting against the water conservation target; reporting on water security, water restrictions and water losses; reporting on the uses of recycled water; reporting and annual comparisons for waters supplied to residential, commercial and other large customers; and reporting against water supply and demand indicators.	Chapter 8
Part 9	Environment – Indicators and Plan	Including: Environmental Management Plan, Environmental and ESD Indicators and Energy Management.	Chapter 9
Part 10	Catchment Management	Including: Reporting within the Catchment Report on bulk water quality monitoring, activities of Hunter Water under relevant planning instruments that affect catchment management, the Water Management Licence, dam safety, catchment management activities, water quality trends in the Williams River; and display and access of the Catchment Report.	Chapter 10
Part 12	Complaints and Dispute Handling	Including: internal complaints handling procedures, the external dispute resolution scheme and complaints made to a court or tribunal.	Chapter 11

The scope of the audit also includes assessment of compliance against the Ministerial requirements and recommendations arising from the 2003/04 Operational Audit and the identification of factors that have affected Hunter Water's performance in the 2004/05 audit year.

The detailed audit brief is contained in **Appendix A** and the Minister's requirements are provided in **Appendix C**.

Whilst the Operational Audit is intended to focus primarily on Hunter Water's performance against the Licence obligations, the Audit also considers and makes recommendations on performance improvement. Additionally, the audit process also considers and investigates relevant issues (i.e. those relating to environment, social welfare and the public interest) raised by the public and stakeholders.

1.4 Structure of the audit report

The format of this audit report has been developed to provide adequate detail directed at different levels of readership to enable an understanding of Hunter Water's operations and its compliance with the Operating Licence.

This report has been prepared to specifically meet the audit brief and the audit requirements of the Operating Licence. The sections of this report correspond to compliance sections as detailed in the separate parts of the Operating Licence (see **Table 1.1** above). It should be noted that the audit findings contained within this report are not presented in a prioritised order of significance. Within each compliance section of this report the following key areas are addressed:

- A summary of findings at the beginning of each section addressing the principal level of compliances and any non-compliances relevant to each area of the audit.
- A summary of the Operating Licence requirements for each section against which Hunter Water's performance has been assessed within that particular section.
- A detailed table describing evidence obtained and findings recorded during auditing, to support the assessment of compliance. The table includes comments regarding the level of compliance with the Operating Licence condition and appraisal of the findings of the audit based on the evidence provided.

Within each part, there is one compliance table. The first part of the table presents compliance with the relevant part of the Operating Licence for the key area. The latter part of the table provides an assessment of compliance with Ministerial requirements for the key area where these are relevant. Each table may also include reference to recommendations made from the previous year's audit and may provide an assessment and comments on compliance against the implementation of the recommendation.

Within each section, the compliance table(s) is followed by (where required):

- a discussion of compliance comments for each key area
- factors affecting compliance for each key area
- recommendations for each key area; key and secondary recommendations are provided.

2. Audit Methodology

Details of the audit methodology are outlined below.

2.1 Standards

The audit was undertaken with an approach consistent with ISO 19011:2000 – Guidelines for quality and/or environmental management systems auditing. This ensured that the audit was undertaken within a broad strategic framework that met the specific requirements of IPART and focused on the key issues that represent potential risks to Hunter Water’s continuing performance. ISO 19011:2000 provides a systematic approach to defining the requirements of the audit, planning, interpreting Operating 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 followed during the preparation and completion of this audit is described below.

Audit inception meeting

An Audit Inception Meeting was held with Hunter Water on 11th August 2004 and was attended by Hunter Water personnel, IPART personnel, PB’s Project Manager and Lead Auditors. The objectives of this meeting were to:

- develop working relationships with key Hunter Water personnel
- determine personnel to be interviewed
- agree on the scope of the audit and protocols to be followed
- allow Hunter Water to provide an overview of compliance with the Operating Licence which included the provision of evidence to support operation compliance with the Operating Licence.

2.3 Conduct of the audit

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

Both Hunter Water and the auditor have adhered to the agreed protocols.

Audit tests

Audit tests were undertaken by each of the Lead Auditors with the assistance of the Support Auditors, and comprised an assessment of the evidence provided by Hunter Water to demonstrate its level of compliance with the requirements within the scope of the audit and by identifying factors that have affected compliance or may affect compliance in the future.

Audit evidence was provided to the Audit Team during interviews with key Hunter Water personnel and included documented evidence provided by Hunter Water, consultation with regulatory and other agencies and receipt of submissions made to IPART as part of the audit process.

The audit tests applied during the conduct of the audit allowed Hunter Water's compliance to be determined in the following categories:

- full compliance
- high compliance
- partial compliance
- low compliance
- non-compliance
- insufficient information
- no requirement.

2.4 Audit interviews

Interviews were conducted by the relevant specialist auditors, as identified in **Figure 2.1**, during August and September 2005. The interviews were undertaken to ensure coverage of all issues as detailed within each part of the Operating Licence and also provided an opportunity for Hunter Water to provide evidence that could support and demonstrate compliance with the Licence requirements.

2.5 Audit team

For the 2004/05 Hunter Water Operational Audit, PB assembled an experienced team to ensure that IPART's requirements were met. The audit team consisted of PB personnel with an in-depth understanding and expertise in the areas encompassed in Hunter Water's Operating Licence. The structure of the audit team and individuals roles is shown below in **Figure 2.1**.

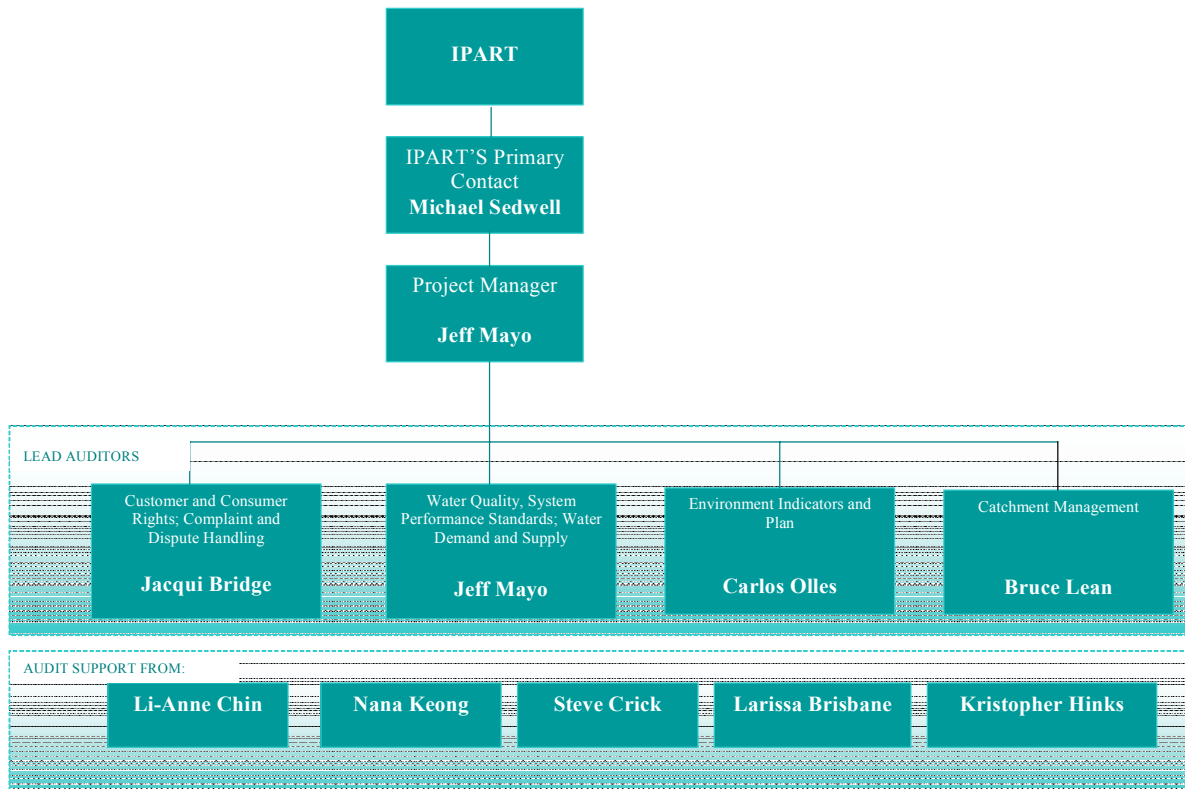


Figure 2.1: Structure and responsibility of the audit team

2.6 Consultation with regulatory and other agencies

Appropriate regulatory and other agencies have been consulted where required regarding comments on Hunter Water's compliance with relevant requirements within the scope of the audit. The agencies consulted included: Department of Environment and Conservation (DEC); Department of Infrastructure, Planning and Natural Resources (DIPNR); NSW Health Department; and Energy and Water Ombudsman NSW (EWON).

2.7 Review of submissions made to IPART

IPART invites submissions from interested parties on any matter relating to the Operating Licence in preparation for the annual audit of Hunter Water's Licence. No submissions were received for consideration in the 2004/05 audit report.

3. Regulatory Regime

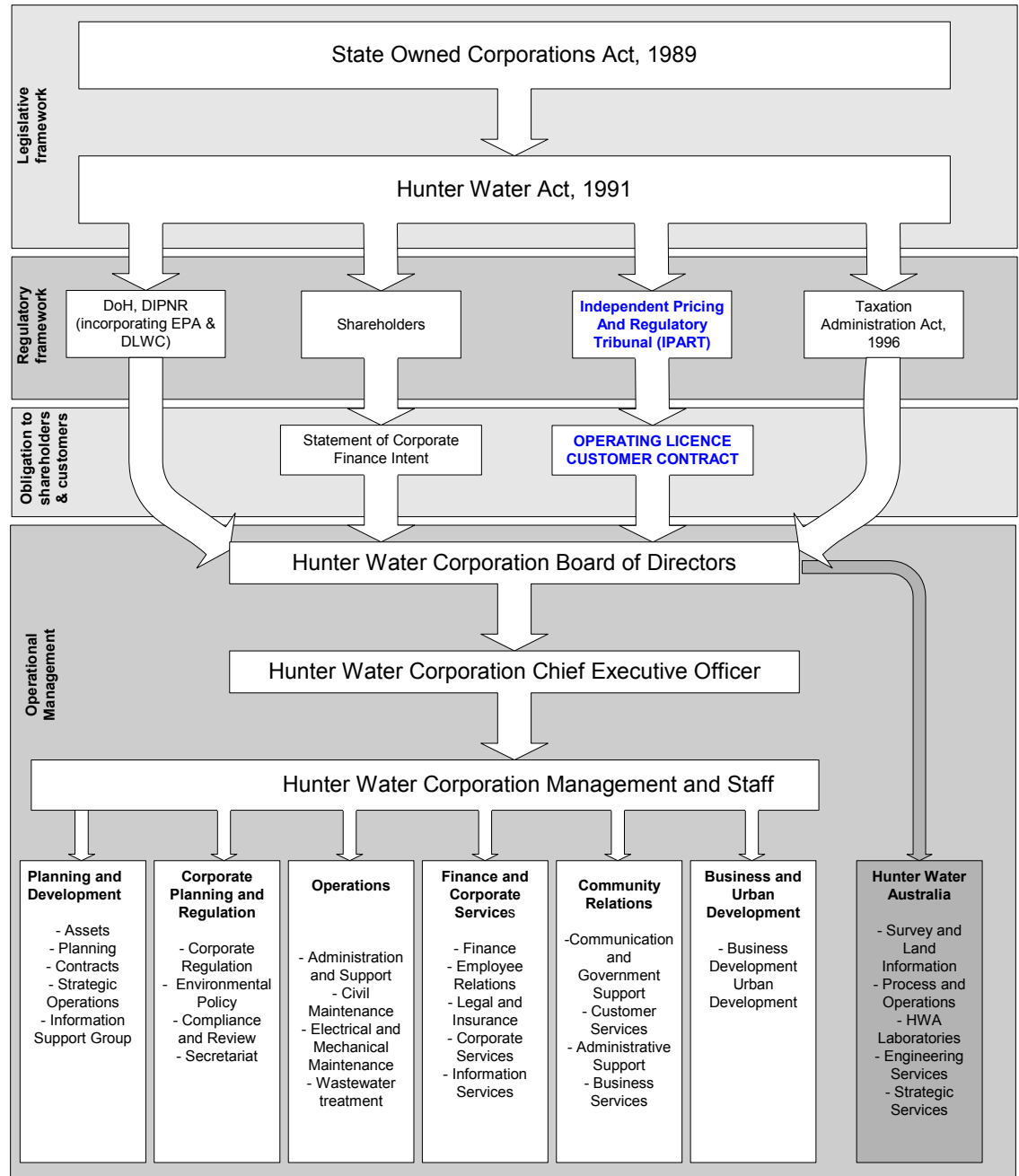
3.1 Introduction

Hunter Water has the primary role of managing the potable water supply and providing sewage treatment to protect public health and the environment for the benefit of the Hunter region. The roles and responsibilities of Hunter Water are established by the provisions of the *Hunter Water Act* 1991. The Act establishes a set of sub-ordinate instruments – the Operating Licence, Memoranda of Understanding (MOUs) – to assist in the operation of Hunter Water. Such instruments impose compliance requirements upon Hunter Water, which are measurable and can therefore be audited. A new Operating Licence came into effect on 1 July 2002 and will remain current until 30 June 2007. This is the second audit conducted under the new Operating Licence.

In delivering its services, Hunter Water must comply with the relevant provisions of legislation, including:

- *Hunter Water Act, 1991*
- *State Owned Corporations Act, 1989*
- *Hunter Water (Special Areas) Regulation, 2003*
- *Protection of the Environment Operations Act, 1997*
- *Public Health Act, 1991*
- *Water Legislation Amendment (Drinking Water and Corporate Structure) Act, 1998*
- *Water Act, 1912*
- *Water Management Act, 2000*
- *Environmental Planning and Assessment Act, 1979*
- *Independent Pricing and Regulatory Tribunal Act, 1992*
- *Dam Safety Act, 1978.*

The regulatory framework, within which Hunter Water operates, is shown schematically in **Figure 3.1**. Brief descriptions of the major components of the statutory system are provided below.



Source: Adapted from Hunter Water Corporation, 2004

Figure 3.1: Regulatory regime of Hunter Water

3.2 Hunter Water Corporation Act 1991

Under Section 13 of the *Hunter Water Corporation Act 1991*, Hunter Water is required to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems and services for supplying water, providing sewerage services and disposing of wastewater and drainage services within the capacity of the drainage service transferred to Hunter Water.

Hunter Water is also required to ensure that the systems and services meet the quality and performance standards specified in the Operating Licence in relation to water quality, service interruptions, price levels and other matters determined by the Governor of NSW and set out in the Operating Licence.

The Operating Licence must also include terms or conditions that require Hunter Water to maintain procedures under which Hunter Water is to consult with its customers at regular intervals in relation to the provision of these systems and services.

The Act also establishes provisions for Hunter Water in relation to the following:

- ownership of works and assets
- entry onto private land
- compensation
- power to open roads
- altering the position of conduits
- interference with works
- compensation to Hunter Water for damage
- interference to works by trees
- liability with respect to paying an annual charge on pipes etc.

3.3 Operating licence

Hunter Water is required to conduct its activities in accordance with the Operating Licence issued under Section 12 of the *Hunter Water Act* 1991. The Operating Licence is valid for five years from 1 July 2002 to 30 June 2007. The objective of the Licence is to enable and require of Hunter Water to lawfully provide the services within its area of operation. This requires Hunter Water to:

- meet the objectives and other requirements imposed on it in the Act
- comply with the quality and performance standards in the Licence
- recognise the rights given to customers and consumers by the Act and Licence
- be subject to annual audits of compliance against the Licence.

3.4 Customer contract

The Customer Contract sets out the rights and obligations of each person defined as a Hunter Water customer and the minimum standards of customer service Hunter Water will provide. The key areas of the Customer Contract have been identified and reviewed in **Section 5.3** of this report.

A new Customer Contract came into effect on 1 September 2003 replacing the previous contract included within the scope of the audit for this year. It provides greater clarity to the rights and obligations of customers and Hunter Water, and incorporates other instruments relating to customer service including the Customer Charter thereby reducing inconsistencies and duplication.

3.5 Memoranda of Understanding

3.5.1 MoU with NSW Health

Under the Operating Licence, Hunter Water is required to maintain a Memorandum of Understanding (MoU) with NSW Health for the duration of the Licence. This MoU has the primary purpose of recognising the role of NSW Health in providing advice to the NSW Government in relation to drinking water quality standards and the supply of water which is safe to drink.

The MoU between NSW Health and Hunter Water dated 19 April 2002 is designed to outline the roles and responsibilities and to facilitate effective interaction between the two organisations. A Joint Operational Group regularly discusses the broad principles, directions and policies underlying the roles of Hunter Water and NSW Health. Hunter Water is required to prepare and submit to NSW Health for review and comment a strategy for the comprehensive management of water quality issues outlining its current and long term intentions for water supply, catchment management and public health aspects of wastewater disposal and reuse. Hunter Water is also required to submit to NSW Health an Annual Water Quality Report, monthly monitoring results and event based results, including all water quality testing exceptions found.

3.5.2 MoU with Department of Environment and Conservation

Although not a requirement of the Hunter Water Act 1991, or the provisions of the Operating Licence, an MoU is in place between Hunter Water and the NSW Department of Environment and Conservation (DEC). The objectives of this MoU are 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 MoU between Hunter Water and the DEC, agreed in January 2000, extends through to 2005 and sets out the framework and ongoing process for interaction between the two organisations. The MoU contains a framework for regular communication, dispute resolution and data sharing. The MoU notes the process of preparing the five-year Environmental Management Plan by Hunter Water and the Annual Environmental Report.

This MoU remained in force and has not been otherwise affected during 2004/05.

3.5.3 Previous MoU with Department of infrastructure, Planning and Natural Resources

The previous MoU with DLWC (now DIPNR) expired June 2002 and has not been replaced. Previous audits have reviewed the correspondence between Hunter Water and DIPNR which states that the relationship between Hunter Water and DIPNR is well developed and that the Strategic Liaison Committee (SLC), a joint committee between Hunter Water and the DLWC, provides an appropriate forum for discussing significant relationship matters. Minutes of the SLC for April 2004 (prior to the formalisation of the decision not to renew the MoU) have been sighted during previous audits and indicate that these meetings do provide a regular forum between Hunter Water and DIPNR where matters of strategic importance can be discussed.

However, during the 2003/04 audit, Hunter Water expressed concern that a protocol that was in the July 2000 MoU, that formalised the actions and procedures of Hunter Water and DIPNR in the event of a breach of the Water Management Licence, had not been retained in some form. This matter has been subsequently addressed with DIPNR informing Hunter Water that non-compliance incidents would be dealt with in accordance with the relevant provisions of the *Water Act 1912* and the *Water Management Act 2000*.

3.6 Water Management Licence

DLWC issued a Water Management Licence (WML) to Hunter Water for a period of 20 years from 1998 that authorised the use of water for the general purpose of urban water supply. The WML is issued to Hunter Water under the Water Act 1912 and is administered by DIPNR. The WML authorises Hunter Water to take and use water and places rules on extractions from the Chichester River, the Williams River and the groundwater extractions from the Tomago Sandbeds and Anna Bay Sandbeds. The WML also contains requirements detailing the management of water resources consistent with the principles of ESD and the prevention of contamination or degradation of the resources. Under the 1998 WML which was current until 25 June 2004, Hunter Water was required to provide data, reports and information to DIPNR including an Annual Demand Management Strategy that analyses consumption trends and unaccounted for water.

Part 9 of the Water Act 1912 requires a review of the WML every five (5) years. This review conducted between Hunter Water and the Department of Infrastructure, Planning and Natural Resources (DIPNR – formerly DLWC) occurred by December 2003 (i.e. within a previous audit year and within the time period allowed for review). Hunter Water was issued with an amended Licence that took force from 25 June 2004.

As noted in previous Audits, the Annual Water Management Licence Report has superseded the previous requirements of the 1998 WML. The Annual Water Management Licence Report is due to be submitted to DIPNR in December 2005.

4. Ministerial Requirements

Hunter Water's compliance with the Ministerial Requirements, resulting from the recommendations of the 2003/04 audit, have been addressed in the corresponding section of the report related to that particular issue, namely Section 7.

The Ministerial requirements are reported in the relevant key areas, **Table 4.1** provides a summary of compliance against these requirements and guidance on where further information on the assessment of these can be located in this report.

Table 4.1: Ministerial requirements and audit recommendations from the 2003/04 audit

Reference	Ministerial Requirement from 2003/04 Operational Audit	Summarised Assessment of Compliance	Location addressed in 2004/05 audit
From the 2003-2004 Audit Report the Minister has required Hunter Water to:			
Water continuity standard	"Continue to review of its maintenance /operational practices to identify additional procedural and/or technological practices to enable it to better meet its water supply continuity Licence requirement."	Full compliance	Section 7
Water continuity standard	"Continue to utilise and trial its maintenance/operational practices identified during the reviews undertaken over the 2003/04 year to reduce the extent and duration of planned water interruptions required to connect new developments to Hunter Water's system."	Full compliance	Section 7
Water continuity standard	"Continue to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance."	Full compliance	Section 7
Water continuity standard	<p>"Review its systems/procedures/practices/ contingency plans to allow Hunter Water to respond more quickly to:</p> <ul style="list-style-type: none"> locate failures/bursts, particularly for its trunk mains; minimise the number of customers affected by the failure by shutting down the trunk main and/or supplying customers from other sources; repair the failure/burst return the trunk main to service, resupplying customers affected." 	Full compliance	Section 7
Water continuity standard	"Consider as part of any review of response procedures the installation of additional pressure/flow monitoring devices linked to Hunter Water's existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed."	Full compliance	Section 7

5. Customer and Consumer Rights

5.1 Summary of findings

Hunter Water has achieved **full compliance** with all of the requirements of the Operating Licence relating to customer and consumer rights for 2004/05. The Customer Contract, Code of Practice for Debt and Disconnection and Consultative Forum described in Section 5 of the Operating Licence are well established and continued to operate in accordance with requirements during 2004/05.

5.2 Summary of requirements

Part 5 of the Licence specifies requirements relating to Customer and Consumer Rights. The key requirements are:

- **Clause 5.1 – Customer Contract:** This clause defines what the customer contract is, how it should be communicated and processes for its review.
- **Clause 5.2 – Consumers:** This clause covers the rights of all consumers in relation to complaints as well as to debt and disconnection.
- **Clause 5.3 – Code of Practice on Debt and Disconnection:** This clause requires a code of practice and procedures on debt and disconnections, its contents, inclusion in the Customer Contract and information about the way the code is disseminated.
- **Clause 5.4 – Consultative Forum:** This clause covers the establishment of a Consultative Forum, its membership, charter, provision of information to the Forum by Hunter Water, reports on the Forum, its review and provision of public information about it.

Clause 11.2.1(a) requires IPART or the auditor to investigate and report on Hunter Water's performance under Part 5 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

5.3 Details of compliance

Table 5.1: Customer and consumer rights – Part 5 of operating licence

Clause	Requirement	Compliance	Findings
5.1.	Customer Contract		
5.1.1	The Customer Contract sets out the rights and obligations of Customers and Hunter 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 applicable law.	No Requirement	Definitional Clause only.
5.1.2	The Customer Contract automatically applies to the persons to whom under the Act or any applicable law, it is expressed to apply.	No Requirement	Definitional Clause only.
5.1.3	A copy of the Customer Contract, and any variations to it must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, and made available at its premises for access or collection by any member of the public, also free of any charges imposed by Hunter Water.	Full compliance	The Customer Contract is available on the website and from the Public Affairs Unit free of charge. A pamphlet summarising the Customer Contract is available free of charge at the Customer Centres.
5.1.4	The Customer Contract may only be varied in accordance with the Act. [Note: The Customer Contract is set out in Schedule 2 of this Licence. Division 5 of Part 5 of the Act contains various provisions in relation to the Customer Contract. Section 38 provides that Hunter Water may vary the Customer Contract with the approval of the Governor. Section 38 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.]	No Requirement	The current Customer Contract was issued in September 2003. The 2003/04 audit report indicated that changes had been made and advertised in a manner approved by the Minister. No changes have been made to the Customer Contract during the 2004/05 audit period.

Clause	Requirement	Compliance	Findings
5.1.5	Unless otherwise required by the Minister, IPART must initiate a review of the Customer Contract. The review must be completed within 12 months of the Commencement date.	No Requirement	There is no requirement during 2004/05. The Customer Contract has not changed during the audit period.
5.1.6	The review must have regard to the system performance standards in Part 7 of this Licence.	No Requirement	
5.1.7	By the date of completion of the review, the person undertaking the review 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	
5.1.8	Within 3 months of the completion of the review of the Customer Contract under clause 5.1.5, Hunter Water must, if directed by the Minister, take all steps necessary to issue a new Customer Contract that addresses the recommendations of the review report.	No Requirement	The new customer contract was issued in September 2003. No changes were required during 2004/05.
5.1.9	<p>Within 3 months of the completion of the review of the Customer Contract under clause 5.1.5, Hunter Water must prepare a pamphlet that:</p> <ul style="list-style-type: none"> (a) provides a brief explanatory introduction to the Customer Contract (b) summarises the key rights and obligations of Customers under the Customer Contract (c) lists Hunter Water's local offices and emergency contact numbers in its Area of Operations. 	No Requirement	The Customer Contract Summary pamphlet was produced and distributed following the issue of the current Customer Contract in September 2003. There is no requirement under this Clause during the 2004/05 audit period.
5.1.10	The pamphlet prepared under clause 5.1.9 must be updated when changes are made to the Customer Contract and must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water and also disseminated by Hunter Water free of any charges imposed by Hunter Water.	No Requirement	The summary pamphlet prepared for the 2003 Customer Contract issue is available free of charge at the Customer Centres and on the Hunter Water website. No changes have been made to the Customer Contract and therefore there is no requirement to update and distribute the pamphlet during the 2004/05 audit period.

Clause	Requirement	Compliance	Findings
	(a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;	Full Compliance	In Newcastle the Rental Bond Board offices are part of the Office of Fair Trading. Staff at the Office of Fair Trading advised that both the Customer Contract Summary and Code of Practice for Debt and Disconnection pamphlets were available for collection at the public interview counters where tenancy related interviews are conducted.
	(b) to Customers or Consumers, at least once every two years with their bills; and	No Requirement	Less than 2 years has passed since the issue of the Customer Contract, therefore there is no requirement to provide in customer bills during the 2004/05 audit period.
	(c) to any other person on request	Full compliance	The Customer Contract Summary is on display and available at Customer Centres and on the website.
5.1.11	Subject to the Act, Hunter 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 Hunter Water and any such person.	No Requirement	Hunter Water has processes in place to assess and offer non standard water service connections. Customers enter into a Non Standard Water Service Agreement with Hunter Water which details the arrangements that have been negotiated.
5.2. Consumers			
5.2.1	Hunter 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	Hunter Water's Customer Contract obligations are extended to tenants as Consumers of the service provided. Complaints from tenants are treated in the same manner as for customers.
5.2.2	Where Consumers are liable to Hunter Water for charges for water use, Hunter Water must fulfil its obligations under the Customer Contract relating to debt and disconnection procedures as if those obligations also extended to Consumers.	Full compliance	<p>Hunter Water reports that obligations relating to debt and disconnection procedures are extended to Consumers where the Consumer (usually a tenant) is liable for charges for water use.</p> <p>The procedures for notification and placing restrictions on supply include notification of both the Consumer and the Customer. Bills, reminder notices, the Customer Contract, and the Code of Debt and Disconnection all include information about the methods of addressing outstanding accounts. The rights of Consumers (tenants) are detailed in the Code of Practice for Debt and Disconnection pamphlet.</p>

Clause	Requirement	Compliance	Findings
5.3	Code of Practice on Debt and disconnection		
5.3.1	Within 6 months of the Commencement date, Hunter Water must develop a code of practice and procedure on debt and disconnection (collectively "Code").	No Requirement	The Code of Practice for Debt and Disconnection is available on the website and has not been changed during the audit period.
5.3.2	The Code must: (a) provide for deferred payment or payment by instalment options for charges (b) provide that the payment options referred to in (a) are to be advised in bills.	High compliance	The Code provides for deferred payment, and for instalment options. The Code does not specifically state that this information is included in customer bills as required by 5.3.2(b). Details regarding payment options are included in customer bills and therefore a High level of compliance has been assigned to this clause. The wording of the Code would need to be altered slightly to advise the customer that payment options are advised in bills in order to achieve full compliance with this clause.
5.3.3	Hunter Water must ensure that the rights and obligations in the Code are incorporated into the Customer Contract as if it were part of the Customer Contract.	Full compliance	Section 5 of the Customer Contract incorporates the rights and obligations detailed under the Code of Practice for Debt and Disconnection. In 2003/04 the auditor recommended that the section concerning disconnection in the Customer Contract pamphlet should mention the Payment Assistance Scheme. No changes have been made in relation to this recommendation, however a number of general references are made to payment assistance in the current Customer Contract.
5.3.4	Hunter Water must disseminate free of charge information on its Code; (a) by placing sufficient copies with the Rental Bond Board for collection by interested persons (b) to Customers or Consumers, at least once each year with their bills (c) to any other person on request.	Full compliance	In Newcastle the Rental Bond Board offices are part of the Office of Fair Trading. Staff at the Office of Fair Trading advised that both the Customer Contract Summary and Code of Practice for Debt and Disconnection pamphlets are available for collection at the public interview counters where tenancy related interviews are conducted. The Code of Practice for Debt and Disconnection was mailed out to customers in the March 2005 billing cycle. Copies of the Code are available in Customer Centres and on the Hunter Water website.

Clause	Requirement	Compliance	Findings
5.4.	Consultative Forum		
5.4.1	Hunter Water must establish and regularly consult with a Consultative Forum to enable community involvement in issues relevant to the performance of Hunter Water's obligations under this Licence.	Full compliance	Hunter Water has a well established Consultative Forum that meets on a quarterly basis, the four sets of meeting minutes have been reviewed by the Auditor. The meetings appear to have been well attended by both community representatives and Hunter Water staff.
5.4.2	The Consultative Forum may be utilised by Hunter Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Hunter Water, on the Customer Contract and on such other key issues related to Hunter Water's planning and operations as Hunter Water may determine, consistent with the Consultative Forum Charter developed under clause 5.4.7.	Full compliance	<p>The Consultative Forum meeting minutes for 2004/05 demonstrated that the forum has covered a wide range of issues during the audit period. Issues include those relating to operational and environmental matters and community activities.</p> <p>In general the Forum appears to function as an effective point for exchange of information between Hunter Water and the community representatives and operates in compliance with the requirements of this Clause and consistent with the Consultative Forum Charter.</p>
5.4.3	A Consultative Forum under this Licence must be established within 6 months of the Commencement date.	No Requirement	Clause 5.4.3 has been satisfied.
5.4.4	If prior to the Commencement date Hunter Water appointed persons to a forum similar to a Consultative Forum, that forum and its membership will continue subject to this clause and will be regarded as a Consultative Forum for the purposes of this Licence. The term of the members of that forum will expire no later than six months after the Commencement date. After that the membership of the Consultative Forum must be determined in accordance with the Consultative Forum Charter established under clause.	Full compliance	The make up of the membership was reviewed in 2002 and members are appointed in accordance with the Consultative Forum Charter.
5.4.5	Hunter Water must at all times appoint the members of the Consultative Forum.	Full compliance	Hunter Water appoints members to the forum and reserves the right to alter the representation as noted in the Consultative Forum Charter. There have been no changes to the organisations represented in the Forum but some representatives of those organisations have changed during 2004/05.

Clause	Requirement	Compliance	Findings
5.4.6	<p>Subject to clause 5.4.4, at all times, the membership of the Consultative Forum must between them include a representative from at least each of the following:</p> <ul style="list-style-type: none"> (a) business and Consumer groups (b) organisations representing low income households (c) people living in rural and urban fringe areas (d) residential Consumers (e) environmental groups (f) local government (g) people from non-English speaking backgrounds. 	Full compliance	<p>The membership of the Consultative Forum was reviewed and all groups are represented in the membership.</p> <p>It was noted that there is only one member representing each of the following categories:</p> <ul style="list-style-type: none"> (b) organisations representing low income households – represented by the member from Newcastle Combined Pensioners Area Council; and (g) people from non-English speaking backgrounds – represented by the member from the Migrant Resources Centre. <p>Representatives from these two groups attended only one of the four Forum meetings during 2004/05. Hunter Water advised that members do receive meeting minutes and copies of information tabled at the meetings when they are not able to attend, however members should also be reminded that substitute representatives may attend when the nominated member is unable to. Attendance is important to ensure adequate representation of various sectors of the community.</p>
5.4.7	<p>Within 3 months of the commencement date, Hunter Water must develop in consultation with the Consultative Forum, a Consultative Forum Charter for the duration of this Licence that addresses the following issues:</p> <ul style="list-style-type: none"> (a) the role of the Consultative Forum (b) selection criteria on how members will be drawn from the community, and information on how vacancies for membership will be advertised (c) the procedure for appointment of members (d) the term of members (e) information on how the Consultative Forum will operate (f) a description of the type of matters that will be referred to the Consultative Forum (g) procedures for the conduct of Consultative Forum meetings, including the appointment of a chairperson 	No Requirement	<p>The Consultative Forum Charter was established in the timeframe required and has remained unchanged during the audit period 2004/05. The Charter is available on the Hunter Water website and includes all of the items listed in Clause 5.4.7.</p>

Clause	Requirement	Compliance	Findings
	<p>(h) communicating the outcome of the Consultative Forum's work to Hunter Water</p> <p>(i) procedures for tracking issues raised and ensuring appropriate follow-up of those issues</p> <p>(j) funding and resourcing of the Consultative Forum by Hunter Water.</p>		
5.4.8	Hunter Water must provide the Consultative Forum with information within its possession or under its control necessary to enable the Consultative Forum to discharge the tasks assigned to it, other than information or documents over which Hunter Water or another person claims confidentiality or privilege.	Full compliance	<p>The 2004/05 meeting minutes demonstrated that a range of information and presentations on specific operational, environmental and community issues was provided to the Consultative Forum. The information and the access to Hunter Water staff is considered appropriate to allow the forum members to discharge tasks assigned to them.</p> <p>Discussion with Forum members showed that members were satisfied with the information provided by Hunter Water and believed that the presentation of information and management of the meetings was "excellent".</p>
5.4.9	A copy of the Consultative Forum Charter must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, and made available at its offices for access or collection by any member of the public, also free of charges imposed by Hunter Water.	Full compliance	The Charter appears on the website. Printed copies of the Consultative Forum Charter were not available for collection, however customer service representatives at the Customer Centres would print a copy free of charge from the website if requested.
5.4.10	Hunter Water must report on the establishment and operations of the Consultative Forum and the development of the Consultative Forum Charter.	Full compliance	A report was prepared for IPART in August 2005. This report covered the audit period 2004/05.
5.4.11	As part of the Licence review referred to in clause 2.3.1 IPART must evaluate and report on the effectiveness of the Consultative Forum and compliance with the Consultative forum charter.	No Requirement	The Licence Review is required to commence on or about 1 January 2006.

5.4 Discussion

A significant number of the clauses in Section 5 of the Operating Licence relate to establishing the Customer Contract, Code of practice for debt and disconnection and the Consultative Forum, within a specified period (usually 3, 6 or 12 months) from Commencement of the Operating Licence. This audit falls in the middle of the 5 year term of the Operating Licence and as a result many of the obligations have been satisfied within the period required and therefore there is no requirement for further action by Hunter Water during the 2004/05 audit period.

5.4.1 Customer contract

Full compliance was achieved for all obligations under Section 5.1 of the Operating Licence. The Customer Contract has been in effect since September 1, 2003, no changes were made during 2004/05, and no specific issues regarding the Customer Contract were discovered during the audit. Hunter Water advised they are not aware of any systemic breaches of the Customer Contract.

Issues raised in the previous audit regarding availability of the Customer Contract summary pamphlet have been resolved and the information is currently available at all locations required by the Operating Licence.

Rebates to customers

The Customer Contract provides for rebates to be paid to customers who experience service interruptions, low water pressure, sewage overflow, or a boil water alert where the number or frequency of incidents exceed the standards defined in the Contract. Compensation may also be paid for damage caused by dirty water and this is determined on a case-by-case basis.

While the individual rebate amounts have increased, standard of service required from Hunter Water before rebates are payable, has also increased compared with the Customer Charter requirements in place prior to September 2003.

The 2003/04 audit report provided a comparison of the number and value of rebates paid to customers in 2002/03 compared with 2003/04. **Table 5.2** has been updated to include 2004/05 data to provide continuity of information on this aspect of the Customer Contract.

Table 5.2 2004/05 data on customer contract rebates

Incident type	2002/03		2003/04		2004/05	
	Number	Total \$ amount	Number	Total \$ amount	Number	Total \$ amount
Water discontinuity		\$4,586	183	\$8,928	530	\$26,500
Low pressure		\$4,700	1,533	\$76,602	22	\$1,100
Sewer overflow		\$ 937	241	\$38,844	517	\$78,378
Total	297	\$10,223	1,957	\$124,374	1,069	\$105,978

Note: Customer Contract implemented 1 September 2003 included changes to rebate framework therefore 2002/03 and 2003/04 are not comparable figures for number or value of rebate.

There was an overall decrease in both the number and total value of rebates issued in the 2004/05 period. The greatest reduction was in rebates issued for Low pressure, which decreased significantly from \$76,602 in 2003/04 to \$1,100 in 2004/05. The reduction is primarily due to ongoing capital works designed to address low pressure problems in some areas.

Rebates paid for water service interruptions and sewer overflow have both increased significantly in 2004/05 and this is attributed largely to the basis upon which rebates are calculated. Rebates are paid based on the number of interruptions/overflows calculated on a rolling 12 month period. As the Customer Contract was introduced in September 2003 each property effectively started from a zero base in 2003/04. The 2004/05 rebates however, will include interruptions/overflows experienced in 2003/04 which carry over in the 12 month rolling average and therefore more customers are eligible for rebates. A comparison with consistent basis will not be possible until 2005/06 figures are reported.

5.4.2 Code of practice on debt and disconnection

Hunter Water achieved full compliance with most clauses in section 5.3 of the Operating Licence. The exception relates to the information contained in the Code of practice for debt and disconnection as defined in Clause 5.3.2(b).

Clause 5.3.2(b) requires the Code to “*provide that the payment options referred to in (a) are to be advised in bills*”. The current Code details the payment options as required by 5.3.2(a) but does not explain that this information is advised in bills. It is recommended that Hunter Water modify the wording in the Code to specifically state that information regarding payment options is advised in customer bills. The omission of this information is not considered to have a significant impact on customers, and the auditor notes that the required information is included in customer bills. However, to achieve full compliance with Clause 5.3.2(b) this statement must be included.

The issue raised in the previous audit regarding availability of the Code of practice for debt and disconnection has been resolved. The information is currently available at all locations, including the Rental Bond Board/Office of Fair Trading, as required by the Operating Licence.

5.4.3 Consultative Forum

Hunter Water has a well established Consultative Forum and has achieved full compliance with section 5.4 Licence obligations. The purpose of the forum is to enable community involvement and to provide Hunter Water with access to advice on the interests of Customers and Consumers and key issues relating to the planning and operations of the business.

The membership includes the required range of business, community and government representatives. However, the Forum includes only one member each representing people from non-English speaking backgrounds, and low income households. The representatives of these two groups attended only one of the four meetings held in 2004/05 and the auditor questions whether this level of participation provides adequate representation of these community groups.

It is recommended that Hunter Water remind Forum members that the representation of their organisation and interest group is important and if they are unable to personally attend meetings then a substitute representative should attend. It is noted that all forum members receive copies of meeting agenda and minutes regardless of their attendance at the meeting and therefore are made aware of the proceedings and may still pass this information on to their member organisation.

Members of the Forum were surveyed and reported that the level of information provided by Hunter Water and access to staff was appropriate and that issues raised by members were dealt with effectively. The flow of information to and from the community organisations occurs in a variety of ways consistent with the type of organisation and the membership involved. Feedback from all members contacted was very positive.

As noted in the 2003/04 audit, the effectiveness of the Forum depends heavily on the degree to which members are fully informed about the activities of Hunter Water, their level of personal involvement and the degree to which the members interact with their constituents through networking and feedback. There does not appear to be any reporting or monitoring of these items in order to confirm the effectiveness of the Forum.

Licence obligation 5.4.11 requires IPART to evaluate and report on the effectiveness of the Consultative Forum as part of the Licence review starting on 1 January 2006. It is recommended that Hunter Water consider how effectiveness can be assessed and demonstrated and include appropriate details in future meeting minutes.

5.4.4 Ministerial Requirements

There were no new Ministerial Requirements relating to Customer and Consumer Rights during the 2004/05 audit period.

As a result of the 2001/02 Operational Audit, the Minister for Energy and Utilities directed that Hunter Water implement monitoring of its operations against a number of customer service indicators in relation to:

- Affordability – specifically the number of disconnections, flow restrictions, debt recovery actions, customers assisted through payment support options.
- Complaints and account contacts – specifically the time to provide substantive responses to complaints by time band.

- Telephone calls – specifically the percentage of telephone calls received by a permanent primary advertised number.
- Metered accounts, where meters were not read.

Figures for these indicators have been supplied for the 2004/05 year and are compared with the 2002/03 and 2003/04 figures in **Table 5.3**. It is noted that some figures collected in earlier years were based on extrapolated data and were recorded at a more aggregated level than current year figures. A summary of the comparison of these indicators is provided in the following sections.

Affordability indicators

All affordability indicators with the exception of Number of Debt Recovery Actions have increased significantly in 2004/05 which may indicate that the service provided by Hunter Water has become less affordable during the period. However as Hunter Water's charges have not increased, apart from relevant CPI increases, it is more likely that the increase in these indicators is due to changes in debt recovery practices as described below.

Disconnection and restriction for non-payment

The number of disconnections for non-payment has increased from a total of 5 in previous years to 30 in 2004/05. The number of flow restrictions for non payment increased by approximately 60% compared to 2003/04, the total number of restrictions was 1,582, more than double the number reported in 2002/03.

Hunter Water advised that the physical disconnection and restriction of customer supply is now contracted to a service provider. Previously one Hunter Water employee was responsible for this activity placing a natural limit on the number of disconnections and restrictions that could be carried out. Hunter Water advised that the increase in the disconnection/restriction numbers reported in 2004/05 is related to the increase in the resource available to carry out this work rather than a decrease in affordability of the service. The contractor carries out restrictions and disconnections as instructed by HWC and is not paid on an incentive basis.

A process flow chart describing the process for managing debt and disconnection is included in **Figure 5.1**.

Hunter Water safeguards elderly customers through its policy not to restrict or disconnect properties housing pensioners, and these are identified as being properties that are subject to a pensioner concession. With regard to all other customers, Hunter Water uses a range of communication methods to stress the importance of the customer contacting Hunter Water to discuss payment problems in order to avoid restriction or disconnection to the supply. Information regarding payment difficulties is provided:

- On customer bills,
- In the Customer Contract (available on the website),
- in the Code of practice for Debt and Disconnection (provided annually), and
- in Information brochures provided with bills.

The increase in restrictions and disconnections is not considered to be linked to any change in policy with respect to safeguarding of vulnerable customers.

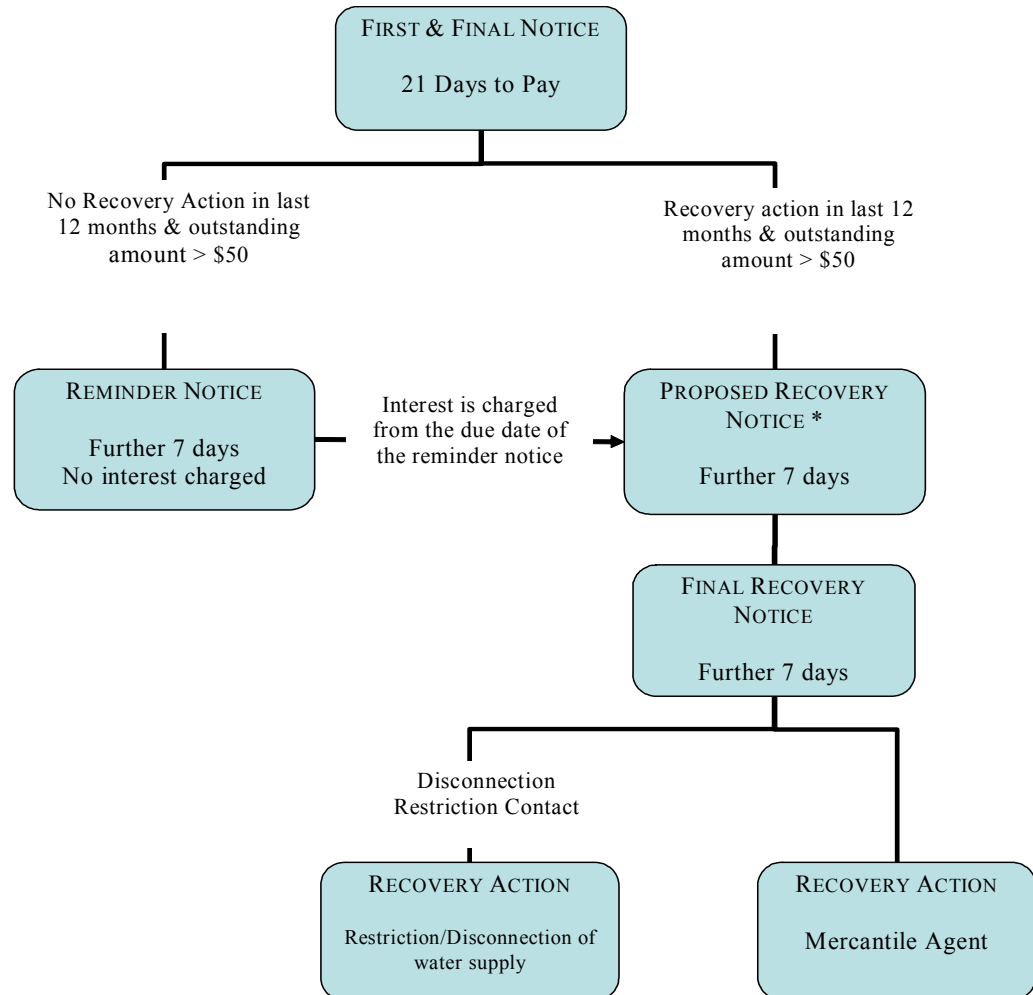


Figure 5.1: Debt and disconnection process diagram

- Notes *
- Proposed Recovery Notices are not produced in the following circumstances: -
 - a) The property attracts a pension rebate
 - b) The property is "exempt" from rating e.g. Church
 - c) The owner has a home dialysis machine installed
 - d) Where the property has a joint water service, proposed & final recovery notices may be sent to a property, however recovery action would be via mercantile agent rather than restriction.

It was noted that an Occupational Health and Safety issue may have contributed to the increase in disconnections. A field worker from another water authority was fatally injured in January 2005 whilst working on a customer meter. Hunter Water already had suitable OHS practices in place for this type of work, but in response to the incident reissued the relevant Work Instruction to staff and contractors to raise awareness and reinforce the need to comply with safety requirements.

The location of the meter on some customer premises means that insertion of a restriction device whilst complying with the OHS requirements is extremely difficult if not impossible. In these instances Hunter Water has issued instructions to disconnect supply by placing a cap and lock over the meter rather than removing the meter and inserting a restriction device. HWC advised that the majority of the increase in disconnections from 2003/04 to 2004/05 was likely to be due to this change in procedure. HWC also advised that it is possible to place a cap and lock over the meter but still maintain a restricted supply to the property, in future it is intended that this method of restricting flow will be used for meters where safe insertion of a restriction device is not possible.

Payment assistance

Payment arrangements and assistance are available for customers experiencing financial difficulties. Where a customer is unable to pay a bill by the due date HWC may offer the customer flexible payment arrangements which allow the outstanding amount to be paid over a period of time.

HWC also participates in a payment assistance scheme (PAS). The scheme is administered by a range of local charities and welfare agencies that assess the individual needs of customers and issue vouchers as required. PAS vouchers have a value of \$25 and are accepted by HWC as payment for outstanding bills. HWC has issued guidelines for the scheme, the underlying eligibility criteria is that the customer is experiencing financial hardship. The welfare agency has discretion to assess the need for assistance and to determine the number of vouchers provided to each customer. Tenants are eligible for assistance through PAS³

There is no fixed limit on the value or number of PAS vouchers that can be issued by each agency. HWC issues books of vouchers to the welfare agencies and these are replenished when all have been issued. In 2004/05 financial year 547 HWC customers received vouchers with a total value of \$39,800. It is noted that there is an inconsistency between the definitions for the Ministerial customer service indicators, the high level description refers to "*Number of customers...*" whilst the second level description refers to "*Payment Assistance Scheme (PAS) vouchers issued*". HWC have reported the number of customers assisted (547) rather than the number of vouchers issued (1,592).

There was a marginal increase (2%) in the number of customers assisted through payment arrangements. The number of customers receiving Payment Assistance Vouchers increased by 192 to 547 in 2004/05 (54% increase compared with 2003/04), it is noted that this number is low in comparison with the number of disconnections and restrictions.

The previous audit recommended further promotion of the PAS to customers. Hunter Water made customers aware of the PAS through a number of mechanisms including:

- the Code of Debt and Disconnection in March –June 2005 customer billing cycle, this leaflet includes details of PAS

³ Tenants living in individually metered residential premises who have an obligation to pay water usage charges are eligible to apply for PAS but assistance is limited to one voucher (\$25) per billing cycle. The tenant must pay the usage account direct to HWC (not through the owner or managing agent).

- a Customer Information leaflet in the March – June 2005 billing cycle, this leaflet included an item on PAS
- details of PAS in the messages-on-hold for customers calling the Customer Contact Centre
- details on the Hunter Water website
- details on the Annual Report which is available on the website.

The credit management team and other customer service staff are aware of the Payment Assistance Scheme (PAS) and provide information to customers where appropriate.

Complaints and account contacts

The overall number of internal complaints recorded reduced by 12% whilst the number of account contacts was steady. Despite the reduction in the number of complaints, the time taken to provide a substantive response to complaints has continued to increase compared to 2003/04 and 2002/03.

Hunter Water advised that the Case Investigation Team was established in August 2004 to deal with customer complaints and has been progressively streamlining procedures. Monthly figures are showing a consistent improvement in response times. The type of complaints received also has an impact on the response times and it was noted that some of the biggest increases in complaints were in service areas contracted to service providers which involve following the complaint through with the contractor.

Account Contacts showed a fairly consistent level of performance with a marginal increase in the response times compared to the previous period.

Telephone calls

The performance indicators relating to time taken to answer calls to the permanent primary advertised number improved. More than 72% of calls were answered within 30 seconds compared with 66% the previous year and 59% in 2002/03. The total number of abandoned calls remained relatively constant.

Metered accounts where meters not read

The percentage of accounts receiving a bill not based on an actual meter reading has continued to increase. This item was noted in the previous audit and a recommendation was made to monitor the causes.

Hunter Water has advised that the systems currently in place to record this information do not allow for monitoring of the causes and therefore this recommendation has not been implemented.

Further investigation of this item during the audit showed that a common reason for an account being billed based on an estimate rather than a meter read is due to failure of the meter. When a routine meter read reveals that the meter has not been operating correctly an estimate is used for billing purposes and the meter is replaced. Therefore data collected by this indicator may relate more the regular operational requirement to identify and replace failed meters than to any systemic problem with meter reading cycles.

The 2003/04 audit recommended that cost effective targets for these indicators, based on the experience of the two audits, be agreed. While this recommendation was made in the body of the audit report it was omitted from the summary of recommendations. As a result it was overlooked by Hunter Water and no action has been taken. Discussions regarding this recommendation concluded that targets for some of the indicators would be inappropriate and not meaningful and therefore the recommendation has not been continued in this audit report.

Table 5.3: Customer service indicators

Indicator		Performance		
		2002 /03	2003 /04	2004 /05
Affordability				
Number of disconnections for non payment	Residential	5	5	25
	Non residential	0	0	5
Number of flow restrictions for non payment	Residential	Total	960	1519
	Non residential	703	49	63
Number of debt recovery actions	Residential	Total	16	0
	Non residential	22	2	0
Number of customers assisted through payment support and/or instalment options	Payment Assistance Scheme (PAS) vouchers issued	-	355	547
	Payment Arrangements	10,331	12,300	12,568
Complaints and Account Contacts				
a) Complaints:	Percentage less than 2 days	43%	35.6%	33.2%
Time to provide a substantive response to complaints by time band	Percentage less than 5 days	55%	49.6%	45.9%
	Percentage less than 10 days	68%	63.8%	59.4%
b) Account Contact	Percentage less than 2 days	99.1%	98.2%	98.9%
Time to provide a substantive response to account contacts by time band	Percentage less than 5 days	99.4%	98.8%	99.2%
	Percentage less than 10 days	99.6%	99.3%	99.5%

Indicator		Performance		
Telephone Calls				
Percentage of calls received by a permanent primary advertised number that are answered:	Within 15 seconds	45.6%	58.1%	59.0%
	Within 30 seconds	59.3%	66.0%	72.2%
	Total time when all incoming lines are busy and callers receive a busy tone	0	0	0
	Total number of calls abandoned	8,138 or 5.1%	7,053 or 4.6%	7081 or 4.5%
Metered Accounts Where Meters Not Read				
Percentage of metered accounts receiving a bill not based on an actual meter read during the report year.		0.5%	0.69%	0.785%

Note: PAS came into effect on 1 July 2003, therefore no figure to report for 2002/03.

5.5 Factors affecting compliance

Customer contract, consumers and code of debt and disconnection

This audit has not assessed full compliance with Clause 5.3.2(b) relating to the details in the Code of practice for debt and disconnection. Clause 5.3.2(b) requires the Code to “provide that the payment options referred to in (a) are to be advised in bills”. The current Code details the payment options as required by 5.3.2(a) but does not explain that this information is advised in bills. It is recommended that Hunter Water modify the wording in the Code to meet the requirements of Clause 5.3.2(b).

The previous audit downgraded the level of compliance from Full to High Compliance for Clauses 5.1.10 (a) and 5.3.4 (a) due to failure of Hunter Water to make copies of the Customer Contract Summary and Code of Practice for Debt and Disconnection available at the Rental Bond Board, as required. Both pamphlets are now available and Full Compliance with these obligations has been achieved.

5.6 Recommendations

5.6.1 Key recommendations

It is recommended that Hunter Water:

- R5.1** Modify the wording in the Code of practice for debt and disconnection to include the requirements of Clause 5.3.2(b).

- R5.2** Remind members of the Consultative Forum that adequate representation of community groups is fundamental to the success of the forum and compliance with the Operating Licence. Ensure members are aware that a substitute representative may attend when the nominated member is unable to attend, given that the organisations represented form the membership of the Forum not the individual members.
- R5.3** Determine ways of assessing the effectiveness of the Consultative Forum and how this might be demonstrated, in preparation for the 2006 Licence Review as detailed in Clause 5.4.11.

5.6.2 Secondary recommendations

It is also recommended that Hunter Water:

- Publicise the work of the Consultative Forum to encourage wider knowledge of its work, its accessibility and the possibility of membership.
- Review with IPART whether the indicator “*number of metered accounts receiving a bill not based on a meter reading*” is providing meaningful information regarding customer service levels.

6. Water Quality

6.1 Summary of findings

Hunter Water supplies water of excellent quality to its customers and accordingly, Hunter Water has achieved **full compliance** with all of its Operating Licence requirements during 2004/05.

6.2 Summary of requirements

Part 6 of the Licence specifies requirements relating to Water Quality supplied to customers and consumers. The key requirements in this part (omitting the definitional clauses) are:

Clause 6.2 – Drinking water quality - standards: This clause specifies the standards of drinking water quality that Hunter Water is required to meet.

Clause 6.3 – Drinking water quality - monitoring: This clause specifies the drinking water quality monitoring requirements that Hunter Water is required to meet.

Clause 6.4 - Drinking water quality - reporting: This clause specifies the drinking water quality reporting requirements that Hunter Water is required to meet.

Clause 6.5 - Drinking water quality - planning: This clause specifies the planning measures that Hunter Water is required to meet to ensure that it meets its drinking water quality requirements into the future.

Clause 6.6 – Other grades of water: This clause specifies Hunter Water's obligations for the supply of "other grades of water".

Clause 6.7 – Environmental water quality: This clause specifies Hunter Water's reporting requirements for any discharges or water releases required by Licence.

Clause 11.2.1(b) requires IPART or the auditor to investigate and report on Hunter Water's performance under Part 6 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

6.3 Details of compliance

Table 6.1: Water quality – part 6 of the operating licence

	Requirement	Compliance	Findings
6.2	Drinking Water Quality – Standards		
6.2.1	<p>Hunter Water must comply with the following relating to drinking water:</p> <ul style="list-style-type: none"> (a) the Drinking Water Guidelines relating to Health guideline values specified by NSW Health. (b) the Drinking Water Guidelines relating to aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc. 	Full compliance	<p>Hunter Water's monitoring results indicate that Hunter Water supplied water of an excellent quality to its customers in full compliance with the requirements of the Australian Drinking Water Guidelines and the requirements of the NSW Department of Health.</p> <p>In particular, Hunter Water achieved:</p> <p>For Microbiological water quality parameters a result of 99.8% (Licence Target = 98%) for Thermotolerant Coliforms and 98.8% (Licence Target = 95%) for Total Coliforms respectively. This represents 100% compliance.</p> <p>For Physical/Chemical water quality, the 12 month 95%iles for all parameters were below the Guideline values. This represents 100% compliance.</p> <p>Note: A 95%ile is the value that 95% of the samples results are equal to or less than.</p>
6.2.2	If there is an inconsistency between the Health guideline values in clause 6.2.1 (a) and the aesthetic guideline value in clause 6.2.1 (b), the Health guideline value is to prevail.	No requirement	Definitional clause only.

	Requirement	Compliance	Findings
6.2.3	In delivering the water services, Hunter Water must have regard to the concepts of risk minimisation practices and system management of public water supplies in the Drinking Water Guidelines (including in relation to Cryptosporidium and Giardia).	Full compliance	As noted in previous Audits, Hunter Water has undertaken a qualitative risk assessment in accordance with AS/NZS 4360:1999 Risk Management. Elements of this approach are exemplified by Hunter Water's: Five-Year Drinking Water Quality Management Plan that utilises a Risk Based Approach; Maintenance of an Incident Management Plan and an Annual Water Quality Monitoring Plan that verify the drinking water quality achieved.
6.2.4	In assessing Hunter Water's compliance with clause 6.2, pH levels in cement mortar lined pipes will be assessed in the range 6.5 – 9.2, in accordance with the Drinking Water Guidelines.	Full compliance	Hunter Water's monitoring results indicate that Hunter Water consistently supplied water with 12 month 95%ile value of 8.3.
6.3	Drinking Water Quality - Monitoring		
6.3.1	Hunter Water must prepare, to the satisfaction of NSW Health, an Annual Comprehensive Water Quality Monitoring Plan for the water supply system by 30 April each year, for the duration of this Licence.	Full compliance	Hunter Water initially developed its Five-Year Water Quality Monitoring plan in 2000. This Plan has been the subject of annual updates each year thereafter. The updated Plan was submitted to NSW Health on 27th April 2004.
6.3.2	The Annual Comprehensive Water Quality Monitoring Plan for the water supply system must provide for performance monitoring and regular sampling, laboratory testing and processes to ensure quality control, as required by NSW Health. The monitoring of water quality must include: <ul style="list-style-type: none"> the health parameters and the aesthetic parameters for which compliance is required under clauses 6.2.1 (a) and (b). the parameters relating to Bulk Water as are specified in Schedule 3. 	Full compliance	Hunter Water's Five-Year Water Quality Monitoring Plan outlines the required performance monitoring and regular sampling, laboratory testing and processes and includes a comprehensive listing of the parameters, historical monitoring records and the results achieved for: <ul style="list-style-type: none"> the health and aesthetic parameters for which compliance is required the parameters relating to Bulk Water as specified.

	Requirement	Compliance	Findings
6.3.3	The monitoring must assess the quality of drinking water supplied by Hunter Water to customers and consumers. 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 customers and consumers, to the satisfaction of NSW Health.	Full compliance	Hunter Water's: <ul style="list-style-type: none"> ■ selection of sampling locations ■ planned frequency of sampling is in accordance with the Australian Drinking Water Guidelines.
6.3.4	Hunter Water must undertake drinking water quality monitoring during this Licence as required by NSW Health.	Full compliance	Hunter Water has carried out the required drinking water quality monitoring.
6.3.5	Where the Drinking Water Guidelines recommend monitoring at a customer's or consumer's tap, Hunter Water must monitor at the property boundary from a water service pipeline directly off a watermain which is representative of the quality of water supplied to the customer or consumer.	Full compliance	Hunter Water monitors drinking water quality at its customer's or consumer's taps as required
6.4	Drinking Water Quality – Reporting		
6.4.1	A monthly summary of Hunter Water's water quality monitoring test results must be placed on its website on the internet each month and also made available at its offices for access or collection by any person, free of any charges imposed by Hunter Water.	Full compliance	Hunter Water places monthly drinking water quality monitoring test results on its website on the internet. These results are also available at Hunter Water's offices for access or collection by interested persons without charge.
6.4.2	Hunter Water must produce an Annual Water Quality Report that compares actual drinking water quality against the requirements of the Drinking water guidelines. The Annual Water Quality Report must provide detail on the Health guideline values and aesthetic guideline values for which compliance is required under clause 6.2.1.	Full compliance	Hunter Water has produced its Annual Water Quality Report that compares actual drinking water quality against the requirements of the Drinking Water Guidelines. The report provides details on the Health and aesthetic guideline values for which compliance is required. This report was made available to the Auditors.

	Requirement	Compliance	Findings
6.4.3	The Annual Water Quality Report must also include a summary of monitoring information, including information relating to Bulk water parameters as specified in clause 6.3.2 and Schedule 3.	Full compliance	<p>Hunter Water's Annual Water Quality Report includes summarised information that includes:</p> <ul style="list-style-type: none"> ▪ water quality trends and a summary of system failures, if applicable; ▪ action taken to resolve deteriorating quality trends and system failures ▪ information relating to Bulk Water parameters as required.
6.4.4	The Annual Water Quality Report must be prepared by 30 November each year, unless otherwise agreed, and must relate to the immediately preceding financial year. The report must be provided to IPART, and must also be placed on Hunter Water's website on the internet for downloading by the public free of any charge imposed by Hunter Water and also made available at its offices for access or collection by any person, also free of charge.	Full compliance	<p>Hunter Water's Annual Water Quality Report was prepared on 24th September 2004 and has been:</p> <ul style="list-style-type: none"> ▪ placed on Hunter Water's website ▪ provided to IPART.
6.5	Drinking Water Quality – Planning		
6.5.1	Hunter Water must maintain, to the satisfaction of NSW Health, a Five-Year Water Quality Management Plan.	No requirement	<p>As per the findings of previous audits, Hunter Water has prepared a Five-Year Water Quality Management Plan during 2000 and accordingly there is no requirement for the 2004/05 Audit year.</p> <p>However, this Plan is due for an update/review during 2005 and will be the subject of Audit for the 2005/06 Audit year.</p>
6.5.2	The Five-Year Water Quality Management Plan must include strategies for the comprehensive management of all aspects of the water supply cycle necessary to ensure that the quality of drinking water supplied to customers and consumers complies with clause 6.2.1. The Plan should adopt the multi-barrier approach to protection of drinking water outlined in the drinking water guidelines covering catchment management and Bulk Water, treatment, disinfection and water supply system management.	No requirement	See findings of previous audits.

	Requirement	Compliance	Findings
6.5.3	Hunter Water must prepare, to the satisfaction of NSW Health, an Annual Water Quality Improvement Plan for the water supply system by 31 March in each year, unless otherwise specified following the review under clause 6.5.5.	Full compliance	Hunter Water has prepared its Annual Water Quality Improvement Plan for the water supply system as required. The plan was submitted to NSW Health on 31st March 2005.
6.5.4	The Annual Water Quality Improvement Plan must incorporate system and operational changes needed to address problems identified through drinking water quality monitoring data and through periodic system inspections and evaluations, the aim of which is to reduce risks to public health and meet any aesthetic guideline values applying to Hunter Water in or by this Licence.	Full compliance	Hunter Water's Annual Water Quality Improvement Plan incorporates system and operational changes needed to address problems identified through drinking water quality monitoring data, etc, as required.
6.5.5	The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Licence to assess its continued effectiveness and whether there is a continued need for the plan each year.	No requirement	Hunter Water's Licence has not been the subject of review during the Audit period and accordingly there is no requirement for the 2004/05 Audit year.
6.5.6	Hunter Water must assess the risks of failing to comply with clause 6.2, in relation to Drinking water. Hunter Water must conduct this risk assessment within six months of the Commencement date, and must review its risk assessment at least twice during this Licence.	Full compliance	As noted in previous Audits, Hunter Water has undertaken a qualitative risk assessment in accordance with AS/NZS 4360:1999 Risk Management. This was undertaken during December 2002. Hunter Water undertook a review of its risk assessment during the second half of 2004. Hunter Water is intending to undertake a further review during 2006.
6.5.7	Hunter Water must maintain, to the satisfaction of NSW Health, an Incident Management Plan, which must remain in place until any new plan is developed in agreement with NSW Health.	Full compliance	As noted in previous audits, Hunter Water has maintained an Incident Management Plan since 1998. The Plan was last updated in 2002. Hunter Water carried out a "Desktop Crisis Management Scenario" to test its current procedures that are currently in place. An additional consultancy assignment was awarded and completed during 2004 following the desktop exercise to revise incident procedures and The Incident Management Plan to address issues learned as a result of this exercise. The Incident Management Plan has been subsequently updated.

	Requirement	Compliance	Findings
6.5.8	The Incident Management 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 of public health advice received from NSW Health to Customers.	Full compliance	As noted in previous audits, Hunter Water's Incident Management Plan incorporates procedures and protocols for the management of specific incidents that include: <ul style="list-style-type: none"> chemical spills wastewater Treatment Plant malfunctions cryptosporidium and/or Giardia outbreaks.
6.6	"Other grades of water"		
6.6.1	Other grades of water" supplied by Hunter 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, and other relevant government agencies.	Full compliance	Hunter Water supplies reclaimed water, or "other grades of water" to a number of customers including industries, golf courses and educational institutions. <p>The supply of "other grades of water" complies with the relevant requirements of the EPA, NSW Health, the Department of Land and Water Conservation, the Department of Agriculture, and other relevant government agencies.</p>
6.6.2	Where there is a conflict between any of the guidelines, requirements or standards applying to Hunter Water under clause 6.6.1 the Minister's decision will prevail.	No requirement	Definitional clause only.
6.6.3	Hunter Water must use its best endeavours to reach agreement with persons to whom "other grades of water" is supplied, as to the water quality standards that are to apply to that water for use other than as drinking water. The terms of the arrangements must at minimum include: <ul style="list-style-type: none"> (a) the standard of the quality of the water supplied; (b) the purpose of the supply (c) the continuity of the water supplied (d) the costs to be paid by Customers for the supply of water to them. 	Full compliance	Hunter Water supplies reclaimed water or "other grades of water" to customers under a Deed of Supply of Effluent that outlines the required terms and arrangements as indicated in the Licence. <p>During the first half of 2004 Hunter Water finalised a review of its supply contracts. Hunter Water now uses these revised supply contracts as the basis for the renewal of contract arrangements for its existing customers whose contracts are due for renewal after July 2004.</p>

	Requirement	Compliance	Findings
6.6.4	Hunter Water must advise persons to whom “other grades of water” is supplied, of the potential uses for the “other grades of water” and of the requirement of the water to undergo water treatment, if it is to be used as drinking water.	Full compliance	Hunter Water’s revised supply contracts provide the required advice regarding the potential uses of “other grades of water”.
6.7	Environmental Water Quality		
6.7.1	Hunter Water must report its performance against any 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	Full compliance	<p>Hunter Water has reported to its performance for two types of environmental releases, as follows:</p> <ul style="list-style-type: none"> ▪ releases from wastewater treatment plants. ▪ environmental flows from Chichester Dam.

6.4 Discussion

Water quality supplied to customers

Hunter Water supplied drinking water of excellent quality to its customers during 2004/05. Monitoring results indicate that the drinking water supplied by Hunter Water to its customers is of an excellent quality having a compliance of 100% with the NHMRC/ARMCANZ Australian Drinking Water Guidelines.

Microbiological indicators

The NHMRC/ARMCANZ Australian Drinking Water Guidelines recommend that drinking water supplied to customers should be monitored for thermotolerant coliforms and total coliforms as indicators of potential microbial contamination. The Guidelines recommend that:

- more than 98% of samples tested should contain zero thermotolerant coliforms per 100 millilitres
- more than 95% of samples tested should contain zero total coliforms per 100 millilitres.

Hunter Water achieved full compliance (100% compliance) with these requirements for 2004/05 as shown in **Table 6.2**.

Table 6.2: Microbiological Indicators – Monitoring Results for 2004/05

Water Quality Parameter	Australian Drinking Water Guideline Value	Value for 2004/05
Thermotolerant Coliforms	More than 98% of samples tested should contain zero Thermotolerant Coliforms	99.8% of samples tested contained zero Thermotolerant Coliforms
Total Coliforms	More than 95% of samples tested should contain zero Total Coliforms	98.8% of samples tested contained zero Total Coliforms

Additionally, monitoring for *Cryptosporidium* and *Giardia* is undertaken fortnightly for Dungog and Grahamstown raw water and quarterly for Tomago, Lemon Tree Passage, Anna Bay, and Nelson Bay raw water. No detection of *Cryptosporidium* or *Giardia* was found during the year.

Physical and chemical indicators

The NHMRC/ARMCANZ Australian Drinking Water Guidelines also recommend that drinking water supplied to customers by Hunter Water should be monitored for a range of physical or chemical parameters. Hunter Water achieved full compliance (100% compliance) with these requirements for 2004/05 as shown in the following **Table 6.3**.

Table 6.3: Physical and chemical indicators – Monitoring results for 2004/05

Water Quality Parameter	Australian Drinking Water Guidelines Value - Health	Australian Drinking Water Guideline Value – Aesthetic	Monitored 95%ile Value for 2004/05
pH	NA	6.5 – 9.2	8.3
Colour	NA	15 HU	5.0 HU
Turbidity	NA	5 NTU	0.70 NTU
Chlorine	5 mg/L	0.6 mg/L	0.80 mg/L
Aluminium	0.2 mg/L	NA	0.083 mg/L
Copper	2 mg/L	1 mg/L:	0.02 mg/L
Fluoride	1.5 mg/L	NA	1.00mg/L
Iron	NA	0.3 mg/L:	0.047 mg/L
Manganese	0.5 mg/L	0.1 mg/L:	0.016 mg/L
Zinc	NA	3 mg/L:	0.02 mg/L
THMs	250 ug/L	NA	117.4 ug/L

Note: A 95%ile is the value that 95% of the samples results are equal to or less than.

Bulk water indicators

Clause 6.3.2 (b) of Hunter Water’s Operating Licence requires the monitoring of its bulk water for the “Schedule 3” parameters. The “Schedule 3” parameters include the following Bulk Water Monitoring Parameters:

- Pesticides - Aldrin, HCB, Heptachlor, BHC, DDT, Lindane, Chlordane, DDD, PCB, DieldrinDDE.
- Chemical - Antimony, Copper, Selenium, Arsenic, Cyanide, Sodium, Barium, Iodide, Sulphide, Beryllium, Lead, Tin, Boron, Mercury, Zinc, Cadmium, Nickel, Silver, Chromium, and Molybdenum.

For the year 2004/05 for Hunter Water’s bulk water supplies:

- No pesticides were detected; and
- All chemical samples were well within the NHMRC/ARMCANZ Australian Drinking Water Guidelines values.

Taste and odour

While the drinking water supplied by Hunter Water during 2002/03 achieved full compliance for quality, Hunter Water experienced a larger number of complaints for taste and odour than it had previously experienced. This prompted a requirement for Hunter Water to increase its previous level of monitoring for taste and odour forming compounds within its raw water. While the number of taste and odour related complaints was significantly less during 2003/04, Hunter Water continued to undertake the additional monitoring during the 2004/05 Audit year.

The number of taste and odour complaints received during 2004/05 is less than for 2003/04 and is significantly less than for 2002/03 as shown in **Figure 6.1**. Hunter Water installed and commissioned a fully automated Powdered Activated Carbon (PAC) dosing plant for the Grahamstown water source during the summer of 2003/04. This plant has been utilised at times (usually during the summer months) during 2004/05 resulting in a corresponding fall in the number of taste and odour related complaints.

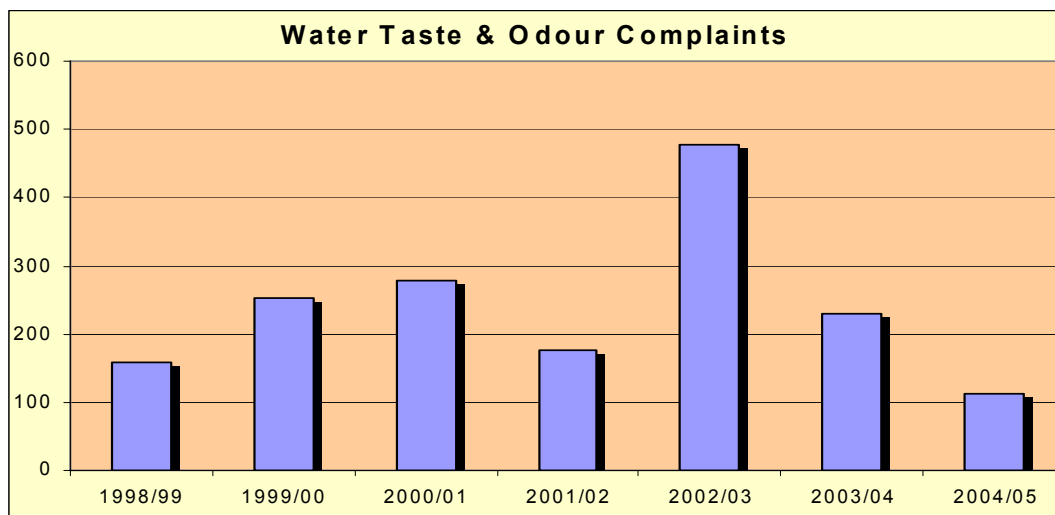


Figure 6.1: Total number of taste and odour complaints from 1998/1999 to 2004/05 Water quality monitoring

Water quality monitoring

Hunter Water undertakes its water quality monitoring for its water supply system in accordance with its Annual Water Quality Monitoring Plan. The preparation of an Annual Water Quality Monitoring Plan, for submission to NSW Health, is a Licence requirement.

Hunter Water's Annual Water Quality Monitoring Plan outlines the planned routine monitoring of the water supply system to be undertaken to ensure compliance with the requirements of the NHMRC/ARMCANZ Australian Drinking Water Guidelines. The Annual Water Quality Monitoring Plan has been found to be consistent with the requirements of the NHMRC/ARMCANZ Australian Drinking Water Guidelines and has been submitted to NSW Health as required.

Additionally, Hunter Water monitors its water quality by its Water Quality Committee on a monthly basis.

Water quality reporting

Hunter Water produces monthly Water Performance Reports that summarise water quality results. These reports are also posted on Hunter Water's website.

At year's end, Hunter Water produces an Annual Water Quality Report that compares system performance against the requirements of the NHMRC/ARMCANZ Australian Drinking Water Guidelines. This report is provided to NSW Health and is also posted on Hunter Water's website.

Water quality planning

As per the findings of previous audits, Hunter Water has prepared:

- a Five-Year Water Quality Management Plan during 2000 and provided it to NSW Health
- an Incident Management Plan that incorporates procedures and protocols for the management of specific incidents that include:
 - < Chemical spills
 - < Wastewater Treatment Plant malfunctions
 - < Cryptosporidium and/or Giardia incidents.

Hunter Water has also prepared an Annual Water Quality Improvement Plan as required by its Licence and has submitted it to NSW Health.

Drinking water risk management

As noted in previous Audits, Hunter Water has undertaken a qualitative risk assessment in accordance with AS/NZS 4360:1999 Risk Management. Elements of this approach are exemplified by Hunter Water's:

- Five-Year Drinking Water Quality Management Plan that utilises a Risk Based Approach
- Maintenance of an Incident Management Plan
- Preparation of an Annual Water Quality Monitoring Plan that verifies the drinking water quality achieved.

Other grades of water

Hunter Water supplies reclaimed water or "other grades of water" to customers under a Deed of Supply of Effluent that outlines the required terms and arrangements as indicated in the Licence.

Last Year's Audit reported that Hunter Water had undertaken a review of its supply contracts and was intending to use these reviewed contracts for existing customers as it renews their contracts after July 2004. Hunter Water has followed through on this initiative and all contracts entered into after July 2004 (whether new contracts of renewals of existing contracts) are based on the revised contracts.

Environmental water quality

Hunter Water has fully complied with the required reporting of its performance for two types of environmental releases, as follows:

- releases from Wastewater Treatment Plants
- environmental flows from Chichester Dam.

It should be noted, however, that Hunter Water's Licence requirement is simply to "report" its performance. There is no specific requirement for attaining the effluent discharge qualities stipulated by the Department of Environment and Conservation (formerly the NSW EPA) in the individual Licences granted to Hunter Water, for example. This is a matter for monitoring and overview by the Department of Natural Resources (formerly the NSW EPA) in the individual Licences.

Ministerial requirements arising from the 2003/04 Audit

There were no Ministerial Requirements arising from the 2003/04 Audit.

Recommendations arising from the 2003/04 Audit

There were no recommendations arising from the 2003/04 Audit.

6.5 Factors affecting compliance

Hunter Water has fully complied with its Licence requirements for Water Quality. Accordingly no events or factors have been identified during the audit period that have affected Hunter Water's compliance with this part (Part 6) of the Operating Licence.

6.6 Recommendations

No recommendations are made regarding Hunter Water's compliance with Part 6 of the Operating Licence.

7. System Performance

7.1 Summary of findings

Hunter Water has achieved **full compliance** with all of its Operating Licence requirements during 2004/05.

Hunter Water has **fully complied** with all of the Ministerial Requirements arising from the 2003/04 Audit.

7.2 Summary of requirements

Part 7 of the Licence specifies requirements relating to the performance of Hunter Water's water supply and wastewater systems. The key requirements in this part (omitting the definitional clauses) are:

Clause 7.3 – System Performance Standards: This clause specifies the standards of system performance that Hunter Water is required to meet.

Clause 7.4 – Reporting on System Performance: This clause specifies the system performance reporting requirements that Hunter Water is required to meet.

Clause 7.5 – System Performance Indicators: This clause specifies the system performance indicators that Hunter Water is required to monitor and report on.

Clause 7.6 - Keeping of Records on Water Interruptions, Low Pressure and Sewage Overflows: This clause specifies records that Hunter Water is required to keep with respect to water interruptions, low pressure and sewage overflows.

Clause 7.7 – Report on Low Pressure Areas: This clause specifies Hunter Water's obligation to report on the location of low water pressure areas within its supply area.

Clause 11.2.1(c) requires IPART or the auditor to investigate and report on Hunter Water's performance under Part 7 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

7.3 Details of compliance

Table 7.1: System performance – Part 7 of the operating licence

Clause	Requirement	Compliance	Findings
7.2	Interpretation		
Commencement and cessation of a water interruption			
7.2.1	<p>A water interruption will be taken to have commenced:</p> <p>(a) In the case of an Unplanned water interruption, on the earlier of:</p> <p>(i) the time that Hunter Water is aware that a water interruption has occurred or the time that, having regard to all the circumstances, Hunter Water ought reasonably to have become aware of a water interruption;</p> <p>(iii) the time that Hunter Water is informed of a water interruption by a person.</p> <p>(b) In the case of a Planned water interruption, at the time that the water is interrupted for work that is specified in the notice given by Hunter Water.</p> <p>(c) A water interruption will be taken to have ended at the time that Hunter Water reasonably estimates that the water interruption ceases.</p>	No Requirement	Definitional clause only.
Commencement and cessation of a pressure incident			
7.2.2	<p>Clause 7.2.1 (a) and (c) applies (with all necessary changes to a pressure incident as if the reference in that clause to a water interruption were a reference to a pressure incident.</p>	No Requirement	Definitional clause only.
Commencement and cessation of a pressure incident			
7.2.3	<p>Clause 7.2.1 (a) and (c) applies (with all necessary changes) to an uncontrolled sewage overflow as if the reference in that clause to a water interruption were a reference to an Uncontrolled sewage overflow.</p>	No Requirement	Definitional clause only.

Clause	Requirement	Compliance	Findings
7.3	System Performance Standards		
Water Continuity Standard			
7.3.1	Hunter Water must ensure that no more than 14,000 properties in a financial year experience one or more water interruptions (whether a Planned water interruption or an Unplanned water interruption) which taken together have a cumulative duration exceeding 5 hours.	Full Compliance	Hunter Water reports that 13,723 properties experienced one or more water interruptions resulting in a cumulative duration of 5 hours or more during the 2004/05 Financial Year.
Water Pressure Standard			
7.3.2	<p>Hunter Water must ensure that no more than 4,800 properties in a financial year experience one or more pressure incidents, where a "pressure incident" is an event where the water pressure to a Property falls below 20 metres head at the point of connection of the property to Hunter Water's main, other than as a result solely of:</p> <ul style="list-style-type: none"> (a) a water interruption (b) water usage by authorised fire authorities in the case of a fire (c) operational problems (including breaks in a main or a failure of a pump) that are temporary and short term in nature. 	Full Compliance	Hunter Water reports that 1,656 properties experienced one or more pressure incidents during the 2004/05 Financial Year.
Sewage Overflows Standard			
7.3.3	Hunter Water must ensure that the number of uncontrolled sewage overflows in a financial year (other than on Public land) does not exceed 6,500.	Full Compliance	Hunter Water reports that it experienced 3,771 uncontrolled sewage overflows onto private property (i.e. onto property other than Public land) during the 2004/05 Financial Year.
7.4	Reporting on system performance		
7.4.1	Hunter Water must report on the number of properties that experience a Planned water interruption, an Unplanned water interruption or an experience as described in clause 7.3.1 of this Licence.	Full Compliance	<p>Hunter Water has prepared and submitted a report outlining its performance with respect to the number of properties that have experienced:</p> <ul style="list-style-type: none"> ▪ planned water interruptions ▪ unplanned water interruptions ▪ planned or an Unplanned water interruptions with a cumulative duration of greater than 5 hours.

Clause	Requirement	Compliance	Findings
Reporting on Water Pressure			
7.4.2	Hunter Water must report on the number of properties that experience one or more pressure incidents described in clause 7.3.2 of this Licence.	Full Compliance	Hunter Water has prepared and submitted a report outlining its performance with respect to the number of properties that have experienced one or more pressure incidents.
Reporting on Sewage Overflows			
7.4.3	Hunter Water must report on the number of uncontrolled sewage overflows (other than on Public land) and whether the uncontrolled sewage overflow occurred in dry weather or wet weather.	Full Compliance	Hunter Water has prepared and submitted a report outlining its performance with respect to the number of uncontrolled sewage overflows.
Publication of reports			
7.4.4	A copy of the reports provided under clause 7.4 must be posted on Hunter Water's website for downloading and also made available at its premises for access or collection by any member of the public, in each case free of any charge imposed by Hunter Water.	Full Compliance	Hunter Water's reports its performance with respect to water interruptions, water supply pressure incidents and the number of uncontrolled sewage overflows. A copy of this report is posted on Hunter Water's website and is made available at its office.
7.5 System Performance Indicators			
7.5.1	Schedule 4 applies.	No Requirement	Definitional clause only.
7.5.2	Hunter Water must report its performance against the system performance indicators in Schedule 4 and must make the report publicly available by posting it on its website for downloading, and make it available at its premises for access or collection by any member of the public, in each case free of any charge imposed by Hunter Water	Full Compliance	Hunter Water has reported its performance with respect to the system performance indicators in Schedule 4 (of the Licence) as required.
7.6 Keeping of records on water interruptions, low pressure and sewage overflows			
7.6.1	Hunter Water must maintain such records as are necessary to meet its obligations under clauses 7.3 and 7.4 of this Licence and Schedule 4.	Full Compliance	Hunter Water maintains adequate records with respect to water interruptions, water supply pressure incidents and the number of uncontrolled sewage overflows as required.
7.6.2	Despite any other obligations in this Licence, Hunter Water must maintain records of the nature and type of water interruptions, pressure incidents and sewage overflows classified by reference to the suburb in which these interruptions, incidents or overflows occur.	Full Compliance	Hunter Water maintains the records of water interruptions, water supply pressure incidents and the number of uncontrolled sewage overflows with reference to suburbs by means of its GIS system.

Clause	Requirement	Compliance	Findings
7.7	Report on low pressure areas		
7.7.1	<p>Within six months of the Commencement date, Hunter Water must report to IPART on the following matters relating to water pressure that is less than 20 metres head:</p> <ul style="list-style-type: none"> the Suburbs or part thereof in which this is experienced on a consistent and systemic basis the number of Properties affected in each Suburb or part thereof the range of pressure and average pressure received by the Properties affected in each Suburb or part thereof an analysis of the reasons for low pressure in each Suburb or part thereof, and options for rectification of the low pressure. 	No Requirement	This has been the subject of previous Audits. Hunter Water submitted the required report during 29th December 2003, within six months of the Commencement date.
Ministerial Requirements arising from the 2003/04 Audit			
From the 2003/04 Audit Report the Minister has required Hunter Water to:			
	“Continue to review of its maintenance /operational practices to identify additional procedural and/or technological practices to enable it to better meet its water supply continuity Licence requirement.”	Full Compliance	Hunter Water has continued the review of its maintenance /operational practices throughout 2004/05.
	“Continue to utilise and trial its maintenance/ operational practices identified during the reviews undertaken over the 2003/04 year to reduce the extent and duration of planned water interruptions required to connect new developments to Hunter Water’s system.”	Full Compliance	Hunter Water has continued to utilise and trial its maintenance/ operational practices identified during the reviews undertaken over the 2003/04 year.
	“Continue to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance.”	Full Compliance	Hunter Water has continued to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance throughout 2004/05.

Clause	Requirement	Compliance	Findings
	<p>“Review its systems/procedures/practices /contingency plans to allow Hunter Water to respond more quickly to:</p> <ul style="list-style-type: none"> ▪ locate failures/bursts, particularly for its trunk mains ▪ minimise the number of customers affected by the failure by shutting down the trunk main and/or supplying customers from other sources ▪ repair the failure/burst ▪ return the trunk main to service, resupplying customers affected.” 	Full Compliance	<p>Hunter Water has continued to review its systems/procedures /practices /contingency plans to allow it respond more quickly to locate failures/bursts, minimise the number of customers affected, repair the failure/burst; and return the trunk main to service, resupplying customers affected</p>
	<p>“Consider as part of any review of response procedures the installation of additional pressure/flow monitoring devices linked to Hunter Water’s existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed.”</p>	Full Compliance	<p>Hunter Water has considered the installation of additional pressure/flow monitoring devices linked to Hunter Water’s existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed and has installed a number of additional devices to date.</p>

7.4 Discussion

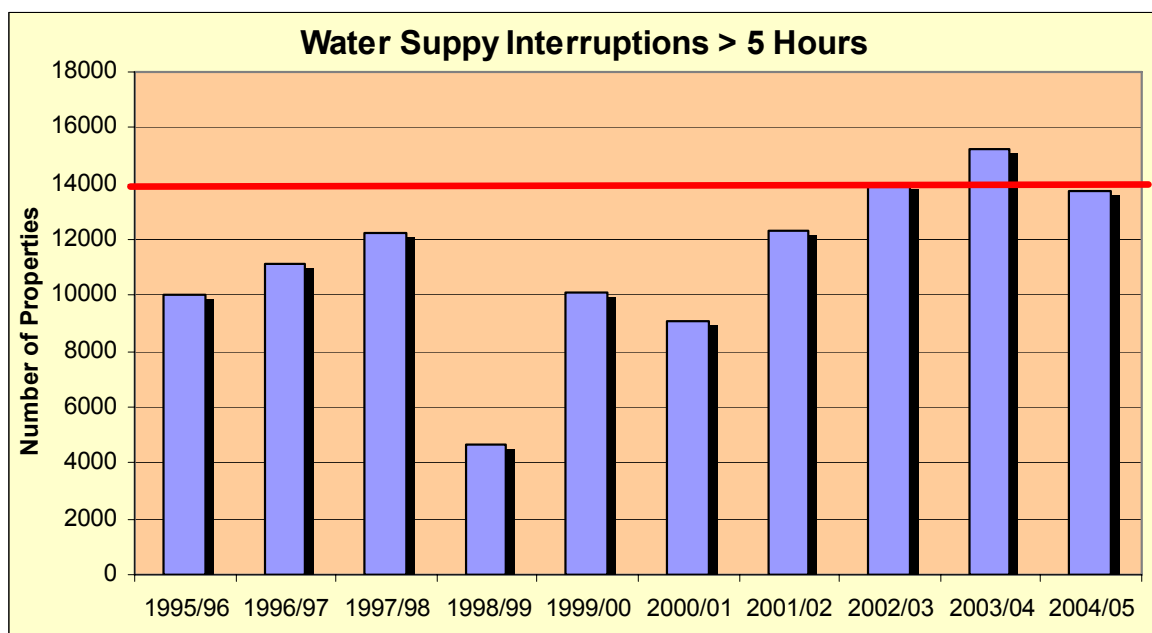
Water supply continuity

Hunter Water's Operating Licence requires that no more than 14,000 properties experience one or more water interruptions (of any type) that together have a cumulative duration exceeding 5 hours during an Audit (financial) year.

Hunter Water has fully complied with this Licence requirement for 2004/05. During 2004/05, 13,723 properties (just less than the required 14,000) experienced one or more water interruptions with a duration in excess of 5 hours.

This current year's full compliance follows last year's non-compliance (where 15,248 properties experienced one or more water interruptions with a duration in excess of 5 hours) and a "close call" to Hunter Water's compliance with this Licence requirement the previous year (2002/03, where 13,966 properties experienced one or more water interruptions with a duration in excess of 5 hours).

Figure 7.1 shows Hunter Water's historical performance for water supply interruptions greater than five hours in duration.



Note: The above data for years 1995/96 to 2001/02 is estimated. The original data was based on an earlier different performance standard.

Figure 7.1: Total Number of Water Supply Interruptions greater than 5 hours (cumulative) from 1995/1996 to 2004/05

Minimising the number of water supply interruptions with a cumulative duration of more than 5 hours is obviously a difficult performance task for Hunter Water, exemplified by the last three year's results whereby Hunter Water has just met the requirement for 2002/03, exceeded the requirement for 2003/04 and again just met the requirement for this year, 2004/05.

In response to this issue, over the last few years Hunter Water has:

- Regularly reviewed the performance of its watermains and assesses failure histories via its “Watermain Replacement Model”. This model is used to determine whether or not replacement of a problematic watermain is justified.
- Recognised that, while its “decision making tool” was still appropriate; more could be done with respect to the timeliness of the subsequent replacement, mainly in the area of procurement. A new procurement strategy for watermain replacements was subsequently trialled and is now in place to reduce the time required for “simple” replacements.
- Implemented tighter controls on large shutdowns for both emergency and planned watermains work. All large (in number of affected customers) are now required to go through a specific approval process to ensure that wherever there are rezoning options available to minimise the size of the shutdown, that these are taken.
- Investigated and subsequently utilised “freezing” technology for the repair damaged hydrants.
- Has been installing valves as the last component in the reticulation for each stage of a subdivision. This ensures that for subsequent subdivision stages, existing customers do not have to be impacted during the connection of new customers to the reticulation system.
- Reviewed its use of direct tapping technology or alternatively “mains freezing” technology to reduce the required number of shutdowns for tappings for larger commercial developments.
- Undertaking condition assessments for its trunk mains. These condition assessments will enable the better identification of trunk mains at risk of failure allowing Hunter Water to take proactive maintenance activities and thus reduce the likelihood of bursts that cause large one-off events occurring in the future.

Since last year’s (2003/04) Audit, Hunter Water has:

- Undertaken more analysis of the breakdown of its water continuity failures to better determine the “root” causes of some of the shutdowns that exceed 5 hours, especially the planned shutdowns that exceed 5 hours. The “first impression” results of this analysis is that some further inroads could be made in two areas, namely:
- Reducing the number of planned shutdowns that take more than 5 hours. Hunter Water has found that a significant number of these planned shutdowns just fail to meet the maximum 5 hour criterion.

Hunter Water has undertaken an analysis of the planned shutdowns that have fallen into the 5 hours plus category for 2004/05. The following chart indicates that for 2004/05 the number of planned shutdowns that fell into the 5 hours plus category increased from the number in the same category for 2003/04 (by more than 400).

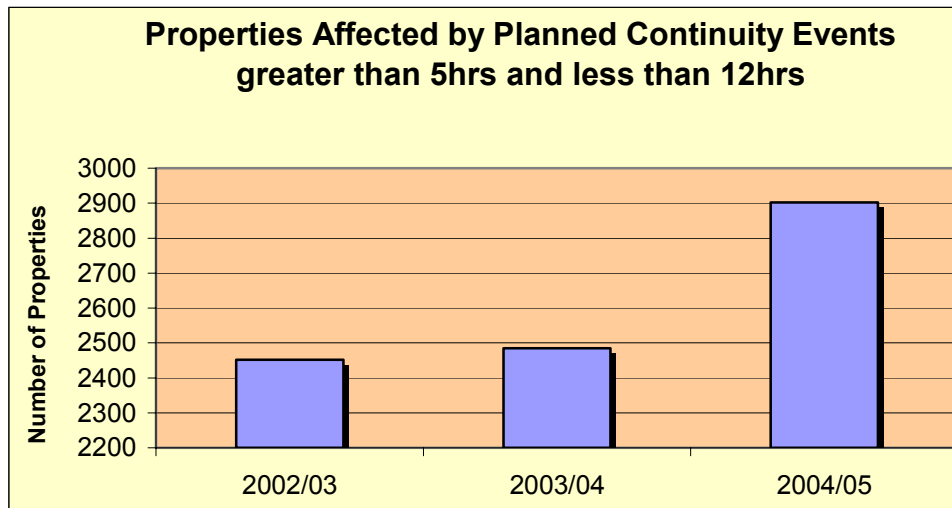


Figure 7.2: Hunter Water’s historical performance for water supply

While this increase in the number of properties affected by planned shutdowns with a duration of more than 5 hours for 2004/05 compared to 2003/04 is not large in the overall context of the total of 13,723 properties affected by 5 hours plus shutdowns for this year it has caused Hunter Water to further analyse this category of planned shutdowns. Hunter Water has been able to determine that the duration of many of the planned shutdowns that fall into the 5 hours plus category are just failing to be completed within the 5 hour period; just failing by 10 minutes or so.

Hunter Water considers that this is a matter entirely within its control by means of increased supervision and management of its works crews.

Decreasing the number of repeat watermain failures. Hunter Water has found that within the discontinuity events that contribute to the overall number of shutdowns in the 5 hours plus category, a significant number are attributable to multiple failures. The Licence requirement that no more than 14,000 properties experience one or more water interruptions with a duration exceeding 5 hours is based on the cumulative interruption period. Accordingly, multiple failures/interruptions can “tip” the total discontinuity period for customers supplied by that watermain into the 5 hours plus category thus adversely impacting on meeting the Operating Licence standard.

For 2004/05, the number of repeat failures to watermains increased by more than 1,200 over the same category of failures for 2003/04 and while not all of these repeat failures contributed to the number of properties that experienced a shutdown of more than 5 hours, a number would have. The increase in multiple failures in the “2 occasions” category is shown in the following chart.

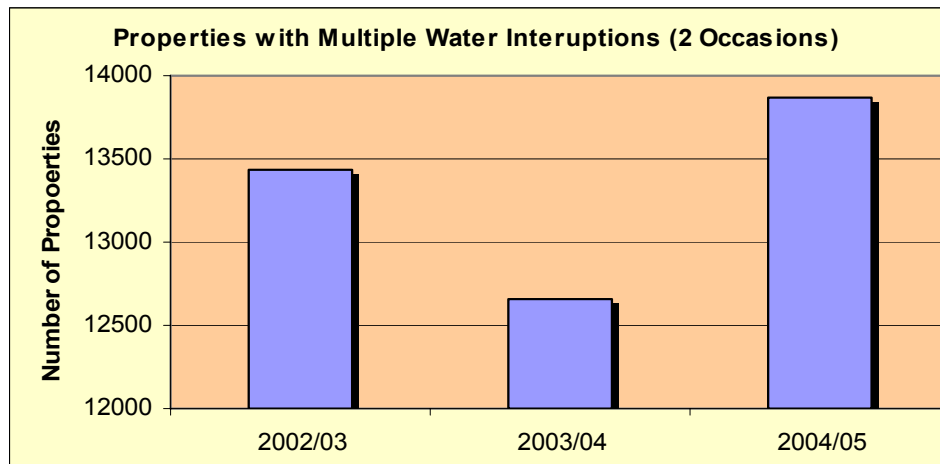


Figure 7.3: Number of Properties that experience multiple water interruptions

Accordingly, reducing the number of repeat interruptions will very likely reduce the number of properties that experience interruptions of greater than 5 hours.

To address these two issues, Hunter Water is proposing to:

- Hold special training events for its day-labour crews, by way of “tool box” meetings, to increase its crew’s awareness of the importance of the timeliness of reconnecting customers following a discontinuity event and hence the need for good job planning prior to shutdowns.
- Further increase its spending on proactive watermain replacements. Prior to last year, Hunter Water spent about \$1M/annum on proactive watermain replacements. This year Hunter water will have spent about \$3M on proactive watermain replacements and is planning to spend about \$4M next year. Hunter Water’s historical and proposed future capital spend on proactive watermain replacement is shown in the following table. This is likely to result in reduced watermain failures in the future, especially repeat failures, resulting in an increased likelihood that Hunter Water will be better able to minimise the number of discontinuities with a duration of more than 5 hours.

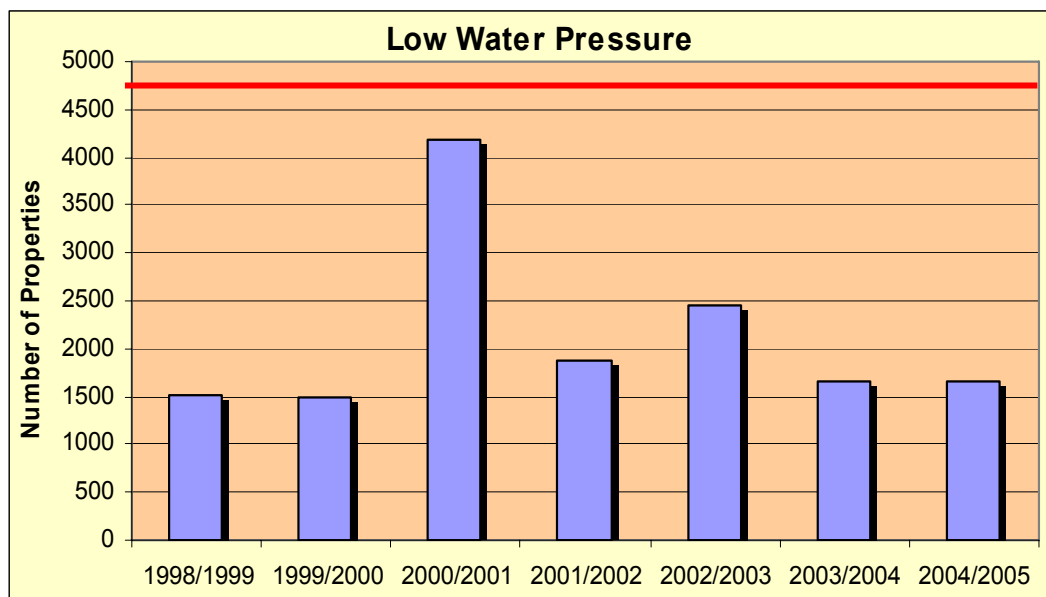
Table 7.2: Watermain replacement Capital Spend

Year	Watermain Replacement Capital Spend per Annum - historical and planned future (\$M)
1999/00	\$0.90M
2000/01	\$0.60M
2001/02	\$1.00M
2002/03	\$1.30M
2003/04	\$1.65M
2004/05	\$3.0M
2005/06, 07 & 08	\$4.0M

Water supply pressure

Hunter Water's Operating Licence requires that no more than 4,800 properties experience one or more "pressure" incidents (where the pressure falls to below 20 metres head) during an Audit (financial) year.

During 2004/05, 1,655 properties experienced one or more "pressure" incidents. For Hunter Water's historical performance with respect to low pressure incidents, refer to **Figure 7.4**.



Note: The above data for years 1998/99 to 2001/02 is estimated. The original data was based on an earlier different performance standard.

Figure 7.4: Total number of properties affected by low water pressure incidents from 1998/99 to 2004/05

Sewage overflows

Hunter Water's Operating Licence requires that the number of uncontrolled sewage overflows onto "other than onto Public land" (i.e. onto private property) in an Audit year does not exceed 6,500.

During 2004/05, 3,711 properties experienced uncontrolled sewage overflows. For Hunter Water's historical performance with respect to sewage overflows refer to **Figure 7.5**.

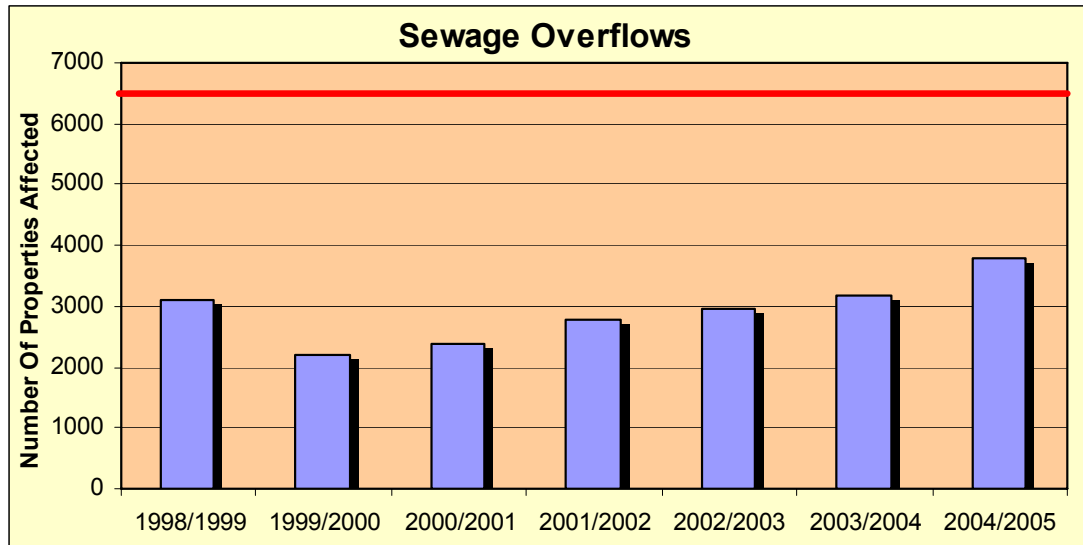


Figure 7.5: Total Number of Properties Affected by Sewage Overflows from 1998/99 to 2004/05

Reporting on system performance

Hunter Water has prepared and submitted the required reports that outline:

- Its performance with respect to the number of properties that have experienced water supply interruptions;
- Its performance with respect to the number of properties that have experienced one or more pressure incidents; and
- Its performance with respect to the number of uncontrolled sewage overflows.

Publication of reports

Hunter Water's report on its performance with respect to water interruptions, water supply pressure incidents and the number of uncontrolled sewage overflows is posted on Hunter Water's website and is made available at its office.

Keeping of records on water supply interruptions, low pressure and sewage overflows

Hunter Water maintains adequate records with respect to water interruptions, water supply pressure incidents and the number of uncontrolled sewage overflows as required.

Ministerial Requirements arising from the 2003/04 Audit

From the 2003-2004 Audit Report the Minister has required Hunter Water to:

- “Continue to review of its maintenance /operational practices to identify additional procedural and/or technological practices to enable it to better meet its water supply continuity Licence requirement.”

Hunter Water has been found to have **fully complied** with this requirement in that Hunter Water has continued to review its maintenance/operational practices throughout 2004/05 so as to better meet its water supply continuity Licence requirement.

- “Continue to utilise and trial its maintenance/operational practices identified during the reviews undertaken over the 2003/04 year to reduce the extent and duration of planned water interruptions required to connect new developments to Hunter Water’s system.”

Hunter Water has been found to have **fully complied** with this requirement. Hunter Water has continued to utilise and trial its maintenance/operational practices identified during the reviews undertaken over the 2003/04 year.

- “Continue to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance.”

Hunter Water has been found to have **fully complied** with this requirement in that Hunter Water has continued to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance throughout 2004/05.

- “Review its systems/procedures/practices/contingency plans to allow Hunter Water to respond more quickly to:
- Locate failures/bursts, particularly for its trunk mains;
- Minimise the number of customers affected by the failure by shutting down the trunk main and/or supplying customers from other sources;
- Repair the failure/burst; and
- Return the trunk main to service, resupplying customers affected.”

Hunter Water has been found to have **fully complied** with this requirement. Hunter Water has continued to review its systems/procedures/practices /contingency plans to allow it respond more quickly to locate failures/bursts, minimise the number of customers affected, repair the failure/burst; and return the trunk main to service, resupplying customers affected.

- “Consider as part of any review of response procedures the installation of additional pressure/flow monitoring devices linked to Hunter Water’s existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed.”

Hunter Water is in **full compliance** with this Ministerial Requirement. Hunter Water has considered the installation of additional pressure/flow monitoring devices linked to Hunter Water's existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed and has installed a number of additional devices to date.

However, due to the constraints of Hunter Water's current telemetry/SCADA system, Hunter Water has been only able to install additional pressure/flow monitoring devices to those sites currently served by its system. Accordingly, there remain a number of sites, identified as potentially critical, that are yet to have monitoring equipment installed and so be monitored. Hunter Water advises that it is about to commission its new SCADA system in the near future and that this new system will have sufficient capacity to enable the connection of more pressure/flow monitoring devices throughout Hunter Water's water supply system. It is considered that Hunter Water's response to date is appropriate, given the constraints of its current SCADA system and that it has commissioned the installation of a new SCADA system in the very near future (i.e. this is still a "work in progress").

Recommendations arising from the 2003/04 Audit

The substantive recommendations arising from the 2003/04 Audit were taken up by the Minister and subsequently conveyed to Hunter Water as Ministerial Requirements. Hunter Water has **fully complied** with all but one of the Ministerial Requirements arising from the 2003/04 Audit and for the requirement for which Hunter Water is deemed to have not fully complied, Hunter Water is in high compliance.

Thus, Hunter Water is deemed to have complied with the recommendations arising from the 2003/04 Audit.

7.5 Factors affecting compliance

Hunter Water fully complied with all of its Licence requirements. Hunter Water has also fully complied with all of the Ministerial Requirements arising from the 2003/04 Audit.

7.6 Recommendations

While Hunter Water has made some progress with the installation of additional flow/pressure monitoring devices throughout its system, it needs to progress with the installation of more devices.

R7.1 It is recommended that Hunter Water should further progress the installation of additional pressure/flow monitoring devices linked to its new telemetry/SCADA system to enable the location of future trunk main failures to be more accurately pinpointed and so further improve its current capability to respond to mains bursts more quickly to:

- minimise the number of customers affected by the failure by means of appropriately shutting down the trunk main and/or supplying customers from other sources

- repair the failure/burst
- return the trunk main to service, resupplying customers affected.

Hunter Water has also recognised that a significant number of planned shutdowns just fail to meet the maximum 5 hour criterion and so add to the total number of interruptions that exceed 5 hours. Hunter Water has identified that work practices within its day-labour crews undertaking the watermain repairs could be improved along with the time management of the works being undertaken.

R7.2 It is recommended that Hunter Water should increase the ongoing level of training of its day-labour crews, to increase its crews awareness of the importance of the timeliness of reconnecting customers following a discontinuity event and increase its overall time management of discontinuity events.

8. Water Supply and Demand

8.1 Summary of findings

Hunter Water has achieved **full compliance** with all of its Operating Licence requirements during 2004/05.

8.2 Summary of requirements

Part 8 of the Licence specifies requirements relating to the Hunter Water's understanding of the current and future water demands on its system and its capacity to meet such demands and/or the plans Hunter Water has in place to meet future water demand. The key requirements in this part (omitting the definitional clauses) are:

Clause 7.3 – System Performance Standards: This clause specifies the standards of system performance that Hunter Water is required to meet.

Clause 8.3 – Integrated Water Resources Plan: Development of the Plan: This clause specifies Hunter Water's requirement to develop an Integrated Water Resources Plan.

Clause 8.4 – Water Conservation Target: This clause specifies water conservation targets that Hunter Water is required to meet and report on.

Clause 8.5 – Water Demand & Supply Indicators: This clause specifies the water demand and supply indicators that Hunter Water is required to monitor and report on.

Clause 8.6 – Annual Reporting on Water Demand & Supply Indicators: This clause specifies the annual reporting requirements for Hunter Water's water demand and supply indicators that Hunter Water is required to meet.

Clause 11.2.1(d) requires IPART or the auditor to investigate and report on Hunter Water's performance under Part 8 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

8.3 Details of compliance

Table 8.1: Water Supply and Demand - Part 8 of the operating licence

Clause	Requirement	Compliance	Findings
8.2.	Interpretation		
8.2.1	Where there is a reference to options developed under the integrated water resources plan, this includes an option or any combination of options.	No Requirement	Definitional clause only.
8.3.	Integrated Water Resources Plan - development of the Plan		
8.3.1	Hunter Water must develop a plan that complies with this part, which in its final form will be known as the Integrated Water Resources Plan ("Plan").	No Requirement	Compliance achieved in 2003 with the release of the IWRP on 1 March 2003. Compliance (i.e. Full Compliance) was previously assessed and determined as part of the 2002/03 Audit.
8.3.2	Hunter Water must develop a draft of the Plan by no later than 30 September 2002, and must post the draft Plan on Hunter Water's website on the internet on that date for a period of not less than 28 days.	No Requirement	This requirement was applicable during the 2002/03 Audit year. Compliance (i.e. Full Compliance) was previously assessed and determined as part of the 2002/03 Audit.
8.3.3	Hunter Water must engage in Public consultation in developing the Plan and must take into account comments received as part of the public consultation process in preparing the final version of the Plan which must be completed by 1 March 2003.	No Requirement	This requirement was applicable during the 2002/03 Audit year. Compliance (i.e. Full Compliance) was previously assessed and determined as part of the 2002/03 Audit. IWRP was released on 1 March 2003.
8.3.4	The Plan must be posted on Hunter Water's website on the internet for downloading, and made available at its premises for access or collection by any member of the public, free of any access charge imposed by Hunter Water.	Full Compliance	IWRP freely accessible via Hunter Water's website (2004/05 Audit) or on request.
8.3.5	Hunter Water must regularly review the Plan, of its own motion or as directed by IPART. Hunter Water may amend any material provisions in the Plan only following Public consultation and after taking into account comments received as part of that Public consultation process. Following amendment, the Plan must be made available as required by clause 8.3.4.	Full Compliance	In mid 2003, an internal Hunter Water working group was formed to review and discuss initiatives and trials forming part of the IWRP program. Hunter Water indicated that the IWRP would be reviewed as part of the IPART licence review which is to commence on or about 1 January 2006. To date there have been no material changes to the IWRP.

Clause	Requirement	Compliance	Findings
8.3.6	Hunter Water must report on any material amendments made in accordance with clause 8.3.5.	Full Compliance	Hunter Water has indicated that, to date, there have been no material changes to the IWRP.
8.3.7	So far as reasonably practicable Hunter Water must, when developing or reviewing the Plan (including the methodology for the Plan), rely on and apply relevant best practice research available in the public domain and endeavour to continually refine and renew its methodologies to reflect current best practice.	Full Compliance	<p>Hunter Water has indicated that to date there have been no material changes to the IWRP.</p> <p>Hunter Water has indicated that the IWRP will be reviewed as part of the IPART licence review which is to commence on or about 1 January 2006.</p>
8.3.8	As part of the Licence review referred to in clause 2.3.1, IPART must evaluate and report on the outcomes achieved by the Plan.	No Requirement	This is a requirement for IPART.
Content and Methodology of the Plan			
8.3.9	The Plan must enable Hunter Water to respond to the water needs in the Area of Operations, having regard to the financial, social and environmental costs of all reasonably available options to manage demand and supply of water.	No Requirement	This requirement applies to the Content and Methodology of the Plan during its development; a requirement for the 2002/03 Audit year. This Licence requirement has been previously audited during the 2002/03 Audit.
8.3.10	<p>The Plan must indicate:</p> <ul style="list-style-type: none"> ▪ how Hunter Water will manage supply augmentation, real losses of water from its water systems and demand for water within its Area of Operations over the next 10 years, and include present value calculations for 20 years; ▪ the planning assumptions, including drought management assumptions employed; ▪ the operational strategy in relation to water resource management; and ▪ all other relevant matters employed. 	No Requirement	<p>This requirement was applicable during the 2002/03 Audit (i.e. the year in which the IWRP was developed.</p> <p>Compliance previously assessed and determined as part of the 2002/03 Audit.</p> <p>IWRP was released on 1 March 2003.</p>
8.3.11	<p>The Plan must quantify the maximum reliable quantity of water that Hunter Water can derive from one year to the next, from its existing water storages, taking into account and quantifying all relevant factors including but not limited to:</p> <p>(a) the capacity of the water storages, and the rates of depletion and recovery of water in the Water storages at current rates of consumption;</p>	No Requirement	<p>This requirement is associated with the development of the IWRP which was released on 1 March 2003.</p> <p>Compliance previously assessed and determined as part of the 2002/03 Audit.</p>

Clause	Requirement	Compliance	Findings
	(b) climatic data, trends and projections; and (c) constraints on extraction of water to the Water storages, including those imposed by the Water Management Licence.		
8.3.12	The Plan must make projections of the total demand for water within Hunter Water's Area of Operations, having regard to relevant factors influencing demand for water, including but not limited to: total growth in consumption, including specific growth rates across the residential, commercial and industrial sectors; rates and trends in leakage and real losses, in terms of the components of the water balance table in the IWA publication; rates and trends in the demand for recycled water; and actual and potential reductions in demand resulting from Hunter Water's initiatives.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.
8.3.13	In developing the Plan, Hunter Water must utilise present value calculations, providing justifications for the discount rate and other inputs used in the calculations.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.
Identifying the Options and associated costs			
8.3.14	The Plan must identify and evaluate all reasonably practicable options to manage demand and supply of water within its Area of Operations, must define the relevant projected outputs from each option and must list the non-financial advantages and disadvantages of each option.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.
8.3.15	In evaluating the options identified under clause 8.3.14 Hunter Water must take all necessary steps to ensure that the Plan: (a) quantifies the estimated costs of each option identified, which must include the financial (capital and operating), social and environmental costs of each option for each year of the Plan; (b) compares the financial, social and environmental costs of each option, in order to determine the least cost option.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.

Clause	Requirement	Compliance	Findings
8.3.16	If Hunter Water is unable reasonably to quantify the social and environmental costs of the options developed under clause 8.3.15, it must instead quantify such social and environmental costs as it is able and provide a description of those that it is unable to quantify.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.
8.3.17	Hunter Water must adopt the least cost option determined under clause 8.3.15 unless there are reasonable and substantive reasons for adopting a different option and those reasons are described in detail in the Plan.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002 / 2003 Audit.
Results of the Plan			
8.3.18	Applying the Plan and the matters in clause 8.3, Hunter Water must outline targets, standards, indicators or other proposals for consideration as part of the Licence review under clause 2.3.1.	No Requirement	This requirement is associated with the development of the IWRP which was released on 1 March 2003. Compliance previously assessed and determined as part of the 2002/03 Audit.
8.3.19	Hunter Water must report its performance against the Plan.	Full Compliance	Hunter Water reports its performance against the IWRP in its IWRP Annual Performance Report and its Environmental and ESD Indicators Report. Both of these reports for 2004/05 have been published on Hunter Water's website.
8.4. Water Conservation Target			
8.4.1	Hunter Water must ensure that the five year rolling average for annual residential water consumption calculated at a Reporting date is equal to or less than 215 kilolitres ("Water conservation target").	Full Compliance	Hunter Water reports its performance against the IWRP in its IWRP Annual Performance Report and its Environmental and ESD Indicators Report. Both of these reports for 2004/05 have been published on Hunter Water's website. The Environmental and ESD Indicators Report for 2004/05 indicates that the five-year rolling average residential water consumption as at 30 June 2005 is 209.1 kilolitres/annum.
8.4.2	Hunter Water must report its compliance with the water conservation target.	Full Compliance	Hunter Water reports its performance against the IWRP in its IWRP Annual Performance Report and its Environmental and ESD Indicators Report. Both of these reports for 2004/05 have been published on Hunter Water's website.

Clause	Requirement	Compliance	Findings
			The Environmental and ESD Indicators Report for 2004/05 indicates (Section 2.5) Hunter Water's compliance with the water conservation target.
8.4.3	Hunter Water must comply with the water conservation target until replaced (if at all) by some or all of the proposals in clause 8.3.18 that are approved as part of the review of the Licence Review under clause 2.3.1.	Full Compliance	The next licence review is expected on or about 1 January 2006.
8.5. Water Demand & Supply Indicators			
Security of Supply			
8.5.1	Hunter Water may impose water restrictions only as approved by the Minister.	No Requirement	No water restrictions were imposed during the 2004/05 Audit year.
8.5.2	Hunter Water must report on the nature and length of each water restriction imposed in a Reporting period and whether (based on information reasonably available to Hunter Water) it is likely to impose a water restriction in the ensuing Reporting period or at any other time during this Licence.	No Requirement	No water restrictions were imposed during the 2004/05 Audit year.
8.5.3	Hunter Water must report on the criteria it applies in determining whether to request that the Minister authorise a water restriction.	No Requirement	No water restrictions were imposed during the 2004/05 Audit year.
8.5.4	Hunter Water must report on the quantity of water (in megalitres) supplied from each Water storage.	Full Compliance	Hunter Water reports the quantity of water supplied from each water storage in Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.
Losses from the Water System			
8.5.5	Hunter Water must report against each of the components in the water balance table consistent with the definitions and methodology in the IWA publication.	Full Compliance	Hunter Water reports on the required components as part of its Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.
8.5.6	Hunter Water must report on the differences in the outcomes in applying clause 8.5.5 between one Reporting period and an immediately preceding Reporting period.	Full Compliance	Hunter Water reports on the differences in the outcomes as part of its Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.

Clause	Requirement	Compliance	Findings
Recycled Water			
8.5.7	<p>Hunter Water must report on the quantity of recycled water (in megalitres) supplied in a Reporting period for the following applications:</p> <ul style="list-style-type: none"> (a) for industrial or commercial use; (b) for direct use in irrigation; or (c) for uses, other than those described in (a) or (b). 	Full Compliance	<p>Hunter Water reports its performance against the IWRP in its IWRP Annual Performance Report and its Environmental and ESD Indicators Report. Both of these reports for 2004/05 have been published on Hunter Water's website.</p> <p>The Environmental and ESD Indicators Report for 2004/05 details Hunter Water's performance for the quantity of recycled water supplied.</p>
Demand Management			
8.5.8	<p>Hunter Water must report on the total quantity of water (in megalitres) supplied by it for each of the following:</p> <ul style="list-style-type: none"> ▪ consumption by persons in Residential Properties; ▪ industrial and commercial uses (excluding use by a Large Customer); and ▪ consumption by Large Customers. 	Full Compliance	<p>Hunter Water reports on the total quantity of water supplied to its different customer types as part of its Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.</p>
8.5.9	<p>In its report, Hunter Water must compare each application in 8.5.8, with the corresponding application in the immediately preceding Reporting period, and indicate whether all or some of the following factors, (or other factors of which Hunter Water is aware), contributed to the difference (if any) in the comparison:</p> <ul style="list-style-type: none"> ▪ growth in the Customer base; ▪ climatic impact; ▪ the nature or extent of consumption of Recycled water; or ▪ demand management initiatives. 	Full Compliance	<p>Hunter Water reports on the comparison of each application (according to clause 8.5.8) as part of its Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.</p>

Clause	Requirement	Compliance	Findings
8.6.	Annual reporting on Water Demand & Supply Indicators		
8.6.1	Hunter Water must report its performance against the water demand and supply indicators under clauses 8.5.1 to 8.5.9. The report may be included in the report on the environmental and ESD indicators required under clause 9.2.8.	Full Compliance	Hunter Water reports on its performance against the water demand and supply indicators as part of its Environmental and ESD Indicators Report. This report for 2004/05 has been published on Hunter Water's website.
8.6.2	Hunter Water must also publicly display the report provided under clause 8.6.1 on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.	Full Compliance	Hunter Water's completed IWRP Annual Performance Report was forwarded to IPART on 1 st September 2005 and is available on Hunter Water's website.
8.6.2	Hunter Water must also publicly display the report provided under clause 8.6.1 on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.	Full Compliance	Hunter Water's completed IWRP Annual Performance Report was forwarded to IPART on 1 st September 2005 and is available on Hunter Water's website.

8.4 Discussion

Integrated water resources plan - development of the plan

Hunter Water achieved **full compliance** with respect to the availability of the IWRP, regular review of IWRP (no material changes to date) and performance reporting.

Hunter Water's Licence required the development of an Integrated Water Resources Plan (IWRP) for submission by 30th November 2002 (i.e. during the 2002/03 Audit year). Hunter Water prepared and submitted its Integrated Water Resources Plan during February 2003. This Licence requirement has been previously audited and Hunter Water has been deemed to have fully complied with this requirement during the 2002/03 Audit. Accordingly, no further comment is required.

Water conservation target

Hunter Water has continued to meet its water conservation target of 215 kilolitres for annual residential water consumption as a five-year rolling average, with actual five-year rolling average water usage of 209.1 kilolitres/residential customer/annum achieved as shown in **Table 8.2**.

Table 8.2: Water conservation results

	Average Residential Water Consumption (kL/annum)					
	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Average Residential Usage	193.3	211.0	209.0	222.0	207.6	196.7
Rolling Five-Year Average for this year	- ¹	- ¹	- ¹	- ¹	208.6	209.1
Target Rolling Five-Year Average	-	-	-	-	215.0	215.0

Note: ¹ No data available for these periods to calculate rolling averages.

Water demand & supply indicators

Table 8.3 shows the reported quantity of water supplied from each of Hunter Water's storages/sources.

Table 8.3: Annual supplies from storages

Source	Annual Supplies for Storages (ML/annum)						Five-Year Average
	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	
Chichester Dam	31,821	31,957	30,123	27,532	28,070	27,957	29,128
Tomago Sandbeds	9,979	15,958	14,749	14,845	16,098	5,176	13,365
Grahamstown Dam	31,252	24,208	24,170	31,142	26,338	37,197	28,611
Anna Bay Sandbeds	3,028	3,517	3,703	3,224	1,586	2,212	2,848
Lemon Tree Passage	754	823	821	884	790	0	664
Total Supplies	76,834	76,463	73,566	77,627	72,882	72,542	74,616

Water losses from water supply system

Hunter Water reports water losses from its water supply system in accordance with the Water Services Association of Australia (WSAA) benchmarking guidelines.

The volume of water loss from Hunter Water's water supply system for 2004/05 was 8,466 ML/annum. This represents a loss of about 98 ML/annum (or about 1.2%) more than the long-term average water loss recorded for Hunter Water. Hunter Water has continued to pursue water losses in its system throughout 2004/05, consistent with the efforts undertaken during 2003/04.

Table 8.4: Annual water losses from water supply system

	Annual Water Losses (ML/annum unless indicated otherwise)				
	2000/01	2001/02	2002/03	2003/04	2004/05
Water supplied	74,0542	73,566	77,627	72,882	71,616
Authorised Consumption	62,148	62,014	66,407	62,844	61,308
Water Losses	11,906	11,552	11,220	10,038	10,308
Apparent Losses ¹	3,092	3,806	3,301	1,862	1,842
Real Losses ¹	8,814	8,466	7,919	8,174	8,466
Real Losses/Connection/Day/(litres)	122	115	106	113	110
Real Losses/Connection/Average Metre of Pressure (litres)	2.44	2.30	2.11	2.03	1.99
Real Losses (as a % of Water Supplied)	11.9%	11.5%	10.2%	11.2%	11.82%
Real Losses per km of pipe	2.07	2.06	1.79	1.84	1.86

Notes: ¹ The term "apparent losses" refers to the difference between metered supply at the bulk sources and metered consumption. This can be misleading as it does not take into account known (and approved) non-metered usage such as flushing, reservoir cleaning and fire fighting. The term "real losses" refers to values that are adjusted to take the non-metered known (and approved) usage into account.

² Per the 2002/03 Audit Report, the difference in the water supplied volume for 2001 from Table 8.3 and 8.4 occurs as a result of an error in a supply meter at Tomago. The figures in Table 8.3 reflect the gross meter readings (i.e. they include the error). In Table 8.4 the water supplied volume has been reduced for the error. Were it to be shown as a gross number, the water loss numbers would need to be increased correspondingly, which would not be an accurate reflection of the actual losses.

Hunter Water has advised that:

- It disagrees with the presentation of water loss data to one or two decimal places as these numbers are derived from measured and unmeasured (but estimated) data and therefore cannot be regarded as absolute numbers to be used for ongoing comparison.
- The Real Loss as percentage of water supplied has varied from 10.2% to 11.9% over the past 5 years. This variation is well within the 95% confidence limit, and for this reason the identification of any trends from past Hunter Water performance is tenuous.
- It reports water losses using IWA terminology in accordance with the requirements of the Operating Licence (clause 8.5). The IWA terminology and methodology for calculating water losses has been developed in order to standardise the calculation of losses for comparison purposes.
- The Infrastructure Leakage Index (ILI) is that ratio of real losses to the unavoidable real losses (UARL). Some system losses are considered to be unavoidable as even the best managed and maintained system will have leaks that are difficult to detect or are so small that the repair cannot be justified.
- The ILI has been universally adopted, and is the only indicator that attempts to create a level playing field by taking account of the number of connections, length of mains and average pressure. For example, Hunter Water has a much lower density of connections (i.e. Hunter Water requires a proportionately longer length of water mains to service its customers). This means that there are more pipe joints and fittings where leaks can occur to deliver a volume of water compared to a system with a higher connection density.
- The ILI normalises loss results to account for these factors where a simple comparison of loss percentages does not.
- On an ILI basis, Hunter Water compares favourably on a national basis and very favourable on an international basis.
- Demand management activities and consumption affects the real loss as a percentage of the supply volume very significantly. In addition to accounting for the "unavoidable" level of leakage, the IWA encourages the use of an Infrastructure Leakage Index (ILI) to compare system losses rather than a percentage due to some inherent problems with percentage measures.
- The figures shown in the preceding Table 8.4 indicate that the real loss in 2001/02 and 2004/05 were the same in volumetric terms at 8,466 ML. However, as a percentage, this loss is greater in 2004/05 as the total quantity of water supplied is lower.
- Hunter Water has a comparatively low per capita consumption of water. If the consumption of water was 81GL in 2004/05 rather than 71GL, the percentage loss would have been 10.3% and not 11.82%.

- If for example Hunter Water was in the highest level restrictions, the total daily consumption has been hypothesised to be at around 150 ML/D. Under this scenario real loss as a percentage of supply would be in the order of 20%, even though the real loss has not changed in absolute terms.
- Hunter Water therefore does not agree with the discussion of water loss in percentage terms.

In terms of the Infrastructure Leakage Index (ILI), Hunter Water's water losses compared to other like major Australian Water Authorities is shown in **Table 8.5** below.

Table 8.5: Comparative Infrastructure Leakage Indices (ILIs)

Water Authority	2001/02	2002/03	2003/04	2004/05
Hunter Water	2.3	2.0	1.7	1.7
South East Water	1.5	1.4	1.3	TBA
City West Water	1.7	2.0	1.4	TBA
Yarra Valley Water	1.3	1.3	1.0	TBA
Sydney Water Corporation	2.8	2.9	2.1	TBA
Brisbane Water	2.0	2.3	2.4	TBA

Notes: Source: WSAAfacts 2004

It is considered that a number of the points that Hunter Water makes with respect to the measurement of water losses, and the subsequent comparisons made, are valid as follows:

- Because the water loss data is derived from measured and unmeasured (but estimated) data, the level of accuracy accorded to the volume of the losses is unwarranted. Accordingly, the use of these numbers as the basis for year-to-year comparison is useful but cannot be viewed as definitive.
- Water consumption volumes do affect the calculated real loss as a percentage of the supply volume and this effect can be significant due to the ongoing presence of "unavoidable" losses in the system.
- Hunter Water does have lower density of connections than other Australian like Water Authorities. This does means that there are more pipe joints and fittings where leaks can occur to deliver a set volume of water compared to a system with a higher connection density.
- On an ILI basis, Hunter Water compares favourably with other similar Australian Water Authorities.

Hunter Water has developed/initiated water conservation measures that include improved operations and maintenance processes of its water delivery system, as follows:

- Water Service Replacement Program

Hunter Water's customers are generally (and historically) connected to the water supply system by means of small diameter galvanised iron pipe. This part of the water service is owned by our customer. Many of these galvanised service pipes have now reached the end of their serviceable life and are deteriorating to the point where they are a source of leakage. Hunter Water undertakes service connection replacement work at its cost as a direct leak minimisation initiative. This water service replacement program costs about \$500,000 per year and results in water loss savings.

- Watermain Replacement Program

Hunter Water currently replaces failed sections of watermain based on an economic evaluation model. Under this model the economic, social and environmental value of lost water is included in the assessment.

This program is currently being enhanced with the development of an automated system to more promptly detect mains that are likely candidates for replacement. The new system links the replacement model directly to the Hunter Water's computerised geographical information system (GIS) and the computerised operations and maintenance system. These linkages will enable the model to flag mains for replacement as soon as the required number of breaks occurs.

- Active Leakage Control

Hunter Water has undertaken active leakage control initiatives that aim to assess the level of leakage, generally through flow monitoring, as a targeted approach for leak detection. Active leakage control is an "intervention" process that aims to identify leaks before they would normally be reported. Hunter Water reports that its recent leak detection work in Lemon Tree Passage found some leaks that might otherwise have not been found as the leakage was draining into the stormwater system or waterways.

- Leak Detection

Hunter Water has undertaken leak detection work in Raymond Terrace, Karuah and Lemon Tree Passage during 2004/05, which included 194km of watermains. The leak detection work was carried out using acoustic loggers. This study identified 30 leaks which were subsequently repaired.

Subsequent flow monitoring has confirmed a reduction in leakage.

- Pressure Management

Hunter Water is also using pressure management to reduce water loss from leaks that are both small and difficult to locate. Pressure management can also reduce the incidence of watermain failures and extend the life of watermains.

Hunter Water selected an area in Windale for creation of a separate water supply zone for a pressure management trial. This zone had a history of substantial leakage and a significant history of watermain breaks. Flow monitoring in the Windale zone commenced in December 2003. A Pressure Reducing Valve (PRV) was installed and the reduction of pressure in the zone commenced in late December 2004.

Following the installation of the PRV, the average night flow has reduced by around 16%.

While water losses are a topical issue during the current drought conditions, the breadth and urgency of Hunter Water's response to water losses is considered to be appropriate given its comparative record of water loss to that of like Water Authorities, its particular circumstances with respect to the current and predicted ongoing availability of water and the high cost (especially when compared to the cost of the water lost) of increased investigation and or repair of relatively minor leaks in the system.

Water consumption by sector

Water consumption by sector is monitored by Hunter Water to examine changes from year to year.

Table 8.6 shows consumption by sector.

Table 8.6: Metered consumption by sector

Metered Consumption (ML)							
Sector	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Five-Year Average
Residential	34,753	38,609	38,886	41,953	40,066	38,558	39,614
Commercial	10,158	10,974	10,563	11,249	10,506	12,073	11,073
Industrial	11,418	8,518	8,364	8,927	8,075	7,234	8,224
Other	3,180	3,685	3,586	3,838	3,311	3,077	3,499
Total Consumption	59,509	61,786	61,669¹	65,967¹	61,958	60,943	62,465

Notes: ¹ Per the 2002/03 Audit, the differences between Authorised Consumption (Table 8.4) & Total Consumption (Table 7.6) occur as a result of different definitions for each term. Authorised Consumption is utilised when measuring/benchmarking water loss and includes water for operational uses such as flushing, reservoir cleaning and fire fighting.

² The 2003/04 figures for "Other" and Total Consumption" require confirmation by Hunter Water prior to the finalisation of this report.

Recycled water

Hunter Water reports that 4,210 ML of sewage effluent were recycled during 2004/05. This represents around 8.5% of the dry weather flows to wastewater treatment plants. This figure is proportionally lower than for previous years and lower than Hunter Water's target for 2004/05 mainly due to a decrease in industrial reuse.

While industrial recycling continues to play an important part in Hunter Water's water recycling strategy, the proportion of recycled water reused by industry has generally declined over the past number of years. This decrease in industrial reuse has been primarily caused by the loss of a major industrial customer, due to a change in this customer's process.

Annual reporting on water demand & supply indicators

In previous years Hunter Water has reported its compliance as part of its annual Community and Environment Report. These results are contained in Hunter Water's Environmental and ESD Indicators Report 2004/05 that has been published on Hunter Water's website. Hunter Water plans to include a report on its compliance for this year as part of its Annual Report. Hunter Water's Annual Report is currently in preparation but is yet to be published.

The need to amend/review Hunter Water's Integrated Water Resources Plan (IWRP)

Recently, the NSW Government announced that a \$27 million water pipeline would be built linking Hunter Water's water supply system to the Central Coast system (operated jointly by Gosford and Wyong Councils) to alleviate water shortages faced by those councils. The pipeline, expected to be complete in late 2006, will have capacity to supply up to 20ML per day to the Central Coast. It will also enable water to be transferred from the Central Coast to Hunter Water should the need arise in the future. It could be argued that the new pipeline has the capacity to supply the Central Coast with up to 7,300ML per year, increasing the total water supplied by Hunter Water by around 10%.

However, this proposed supply of water will be subject to a Memorandum of Understanding between Hunter Water and the Central Coast. It is understood that the Memorandum of Understanding will provide for:

- The supply of water to the Central Coast during times of need by the Central Coast when, and only when, Hunter Water has adequate capacity to supply.
- The ability for Hunter Water to interrupt the supply of water to the Central Coast to allow Hunter Water to maintain security of supply to its own customers, for reasons of water quality or to enable Hunter Water to undertake maintenance of its system.
- In times of reversed circumstances, the supply of water to Hunter Water from the Central Coast.

It is also understood that the water supply to the Central Coast by Hunter Water is a temporary measure required until such time as the Central Coast completes its water supply augmentation works.

Accordingly, the current proposal to provide the Central Coast with water is not considered to be a reason, of itself, to cause Hunter Water to amend/review its Integrated Water Resources Plan.

Other issues are more likely to combine to cause Hunter Water to amend/review its Integrated Water Resources Plan. These issues include the introduction of BASIX (a new Government initiative by way of a planning tool for new development) and potential future population growth proposed within Hunter Water's supply district.

BASIX requires a reduction in potable water consumption and one of the initiatives being utilised to achieve this is the installation of on-site water storage tanks within new developments. This is likely to cause some change to water supply needs going forward.

Accordingly, Hunter Water's Integrated Water Resources Plan is likely to need amendment/review to account for at least these two emerging issues in the near future; a need that Hunter Water has recognised and acknowledged.

8.5 Factors affecting compliance

Hunter Water has fully complied with its Licence requirements for Water Supply and Demand. Accordingly no events or factors have been identified during the audit period that have affected Hunter Water's compliance with this part (Part 8) of the Operating Licence.

8.6 Recommendations

It is recommended that Hunter Water:

- R8.1** Be required to amend/review its Integrated Water Resources Plan should the commitment to supply the Central Coast transition into a supply requirement that is more permanent in nature.

9. Environment – Indicators and Plans

9.1 Summary of findings

Hunter Water achieved **full compliance** with respect to the recognition of the Environmental Management Plan (EMP) in its 2004-2007 Strategic Business Plan, the establishment of targets and timeframes for environmental activities to be undertaken by Hunter Water and its availability.

The requirements associated with the majority of the sub-clauses under clause 9.1, Environmental Management Plan, were found to not occur within the audit period and have been, accordingly assessed as **no requirement**.

Hunter Water achieved **full compliance** with respect to the requirements relating to monitoring and compiling data regarding its performance against the environmental and ESD indicators.

Again, a large number of the requirements of the sub-clauses under 9.2 Environmental and ESD Indicators were found not to occur within the audit period and have been, accordingly assessed as **no requirement**.

No requirement findings were identified by this audit for both sub-clauses under clause 9.3, Energy Management.

In relation to Clause 9.3.1, the audit notes that a licence amendment may be required due to the relevance of SEDAs.

9.2 Summary of requirements

Part 9 of the Licence specifies requirements relating to environmental indicators and plans. The key requirements in this part (omitting the definitional clauses) are:

Clause 9.1 – The Environmental Management Plan: This clause specifies the requirements for the production of an Environmental Management Plan.

Clause 9.2 – Environmental and ESD Indicators: This clause specifies the requirements for the monitoring and reporting of performance with respect to environmental and ESD indicators.

Clause 9.3 – Energy Management: This clause specifies the requirement for participate in an Energy Smart Business Program.

Clause 11.2.1(e) requires IPART or the auditor to investigate and report on Hunter Water's performance under Part 8 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

9.3 Details of compliance

Table 9.1: Environmental – Indicators and Plan – Part 9 of Operating Licence

Clause	Requirement	Compliance	Findings
9.1	Environmental Management Plan		
9.1.1	Hunter Water must produce a five-year Environmental Management Plan within three months of the Commencement date. After that Hunter Water must produce further five-year Environmental Management Plans every five years.	No Requirement	<p>Compliance achieved in June 2002 with the final version of the EMP (2002-2007).</p> <p>The next EMP is due in 2007. Work on the next EMP is expected to start in 2006.</p>
9.1.2	Hunter Water must engage in Public consultation in developing an Environmental Management Plan.	No Requirement	Compliance achieved in 2002, details of consultation process undertaken provided in Executive Summary of current EMP.
9.1.3	The Environmental Management Plan must:		
9.1.3(a)	Contain details of Hunter Water's environmental improvement strategies and objectives for its catchments, Water storages, Water supply system, Sewerage system, and Drainage system, as well as the environmental aspects of its other activities such as energy management, waste minimisation and heritage.	No Requirement	<p>Compliance achieved as part of 2002/03 audit, with the final EMP issued in June 2002.</p> <p>Details of the environmental improvement strategies and objectives are categorised under the following sections:</p> <ul style="list-style-type: none"> ▪ Water Resources ▪ Wastewater ▪ Community ▪ Stormwater ▪ Corporate
9.1.3(b)	Endorse ESD principles.	No Requirement	<p>Compliance achieved as part of 2002/03 audit.</p> <p>ESD principles are incorporated into the EMP.</p> <p>Annual report prepared on ESD and Environmental Indicators by Hunter Water has been completed and is available on Hunter Water's website.</p>

Clause	Requirement	Compliance	Findings
9.1.3©	Be recognised in Hunter Water's business plans.	Full Compliance	The 2004-2007 Strategic Business Plan recognises the EMP (page 19 The Environment. "Meet the objectives set out in Hunter Water's Environmental Management Plan".
9.1.4	The Environmental Management Plan must set targets and timetables for environmental activities to be undertaken by Hunter Water over the term of the Environmental Management Plan. These targets must utilise the environmental and ESD indicators in clause 9.2 and also the reports, policies and indicators in clauses 9.3 and 10.1.	Full Compliance	<p>Timeframes for actions are detailed under the Target section associated with the EMP objectives and actions.</p> <p>ESD and Environmental Indicators were approved by the Minister in March 2003.</p> <p>Observation: ensure the units of reporting presented in the Annual Environmental & ESD Indicators report match those stated in the EMP.</p>
9.1.5	Any material amendments may only be made to the Environmental Management Plan following Public consultation.	No Requirement	<p>No material amendments have been made to the EMP.</p> <p>Any suggested changes will be assessed when the new EMP is prepared.</p>
9.1.6	Hunter Water must report on any material amendments made in accordance with 9.1.5.	No Requirement	No amendments have been made to the EMP to date.
9.1.7	The Environmental Management Plan must be provided to IPART on its completion and posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, made available at its Customer centres for access or collection by any member of the public and lodged with public libraries in the Area of Operations, in each case also free of charge.	Full Compliance	<p>The EMP is freely available on Hunter Water's website, and is provided free on request.</p> <p>The final version of the current EMP was issued in June 2002.</p>
9.2 Environmental and ESD Indicators			
9.2.1	In accordance with this section, Hunter Water must monitor and compile data on indicators of the direct impact of its activities on the environment and the extent to which its Services comply with the principles of ESD, whether such activities and Services are carried out by or on behalf of Hunter Water.	Full Compliance	<p>Hunter Water monitors and compiles data to enable it to comply with the requirements of clause 9.2.7 and 9.2.8.</p> <p>The activities of others with respect to monitored/controlled by contract documents which requires a project specific EMP to be prepared. A project specific EMP must reflect the requirements of the Hunter Water Corporate EMP and EMS.</p> <p>Hunter Water design manual and review process is an important control mechanism.</p>

Clause	Requirement	Compliance	Findings
9.2.2	Hunter Water must develop a draft list of environmental and ESD indicators within 3 months of the Commencement date.	No Requirements	Compliance achieved as part of 2002/03 audit.
9.2.3	In developing the environmental and ESD indicators, Hunter Water must have regard to the Commonwealth State of the Environment Reporting system and the 'Australia: State of the Environment Environmental Indicator Report' series produced by Environment Australia.	No Requirement	Compliance achieved as part of 2002/03 audit.
9.2.4	The environmental and ESD indicators developed by Hunter Water must be consistent with the scope and objectives of the Environmental Management Plan.	No Requirement	Compliance achieved as part of 2002/03 audit.
9.2.5	The draft list of environmental and ESD indicators developed by Hunter Water must undergo Public consultation.	No Requirement	Compliance achieved as part of 2002/03 audit.
9.2.6	Within 3 months of the close of submissions, following Public consultation under clause 9.2.5, Hunter Water must present a final list of environmental and ESD indicators to the Minister for approval.	No Requirement	Compliance achieved as part of 2002/03 audit.
9.2.7	Hunter Water must commence monitoring and compiling data on the environmental and ESD indicators from the date of approval by the Minister.	Full Compliance	Environmental & ESD Indicators were approved in March 2003. First Indicator report was issued for 2003/04. The 2004/05 Annual Environmental & ESD Indicator Report has been issued and is available on Hunter Water's website.
9.2.8	Hunter Water must report its performance against its environmental and ESD indicators in its annual environment report. Hunter Water must publish the results of the environmental and ESD indicator monitoring in the environment report. The report must specify trends to allow comparison with previous results.	Full Compliance	Hunter Water reports its performance in its Annual Environmental and ESD Indicators Report. An appendix to this report includes practicable trend data. This report for 2004/05 has been published on Hunter Water's website.
9.2.9	The environmental and ESD indicators in clause 9.2.6 must be reviewed as part of the Licence review referred to in clause 2.3.1.	No Requirement	The next scheduled IPART licence review is on or about 1 January 2006.
9.3	Energy management		

Clause	Requirement	Compliance	Findings
9.3.1	During this Licence, Hunter Water must participate in the Energy Smart Business Program, or similar program administered by SEDA.	No Requirement	<p>Hunter Water advised that:</p> <p><i>“Work with DEUS to establish rational energy savings targets is currently on hold following the cessation of the Energy Smart Business Program and pending clarification of the requirements for Hunter Water of the new Energy Administration Amendment (Water and Energy Savings) Act 2005.</i></p> <p><i>Our understanding is that this act will require preparation of plans to save energy however the exact nature of the requirements is currently being determined.</i></p> <p><i>Once clarification of the requirement of the above new legislation is received Hunter Water will be seeking to have revised clauses inserted in its Operating Licence in lieu of these based around the SEDA MOU.</i></p> <p><i>In the interim, Hunter Water will continue to seek justifiable energy saving initiatives and is currently working with its major energy provider Country Energy and a number of energy management consultants to identify further sources of savings”.</i></p> <p>The 2004/05 Annual Environmental & ESD Indicator Report has been issued and is available on Hunter Water’s website.</p> <p>Observation: may require a licence amendment due to the disbanding of the Energy Smart Business Program</p>
9.3.2	Hunter Water must report on any actions or activities undertaken by Hunter Water as part of the Energy Smart Business Program and any other energy management or green power initiatives.	No Requirement	<p><i>Refer to comments provided against Clause 9.3.1.</i></p> <p>The 2004/05 Annual Environmental & ESD Indicator Report has been issued and is available on Hunter Water’s website.</p> <p>Energy Efficiency is a specific section in the Hunter Water Annual Report (2003/04). Next annual report is due in September 2005.</p>

9.4 Discussion

9.4.1 Environmental Management Plan

Hunter Water achieved full compliance with respect to the recognition of the EMP in the 2004-2007 Strategic Business Plan, the establishment of targets and timeframes for environmental activities to be undertaken by Hunter Water and its availability.

The requirements associated with the majority of the sub-clauses under clause 9.1, Environmental Management Plan, namely sub-clauses 9.1.1, 9.1.2, 9.1.3a, 9.1.3b, were found to not occur within the audit period and have been, accordingly assessed as no requirement.

Hunter Water has made no material or other amendments to the EMP, therefore sub-clauses 9.1.5 and 9.1.6 of the Operating Licence have not been triggered (i.e. findings of no requirement). However, potential amendments to the EMP that have been suggested, either internally or by external stakeholders, are being recorded by Hunter Water for consideration when the EMP is due for revision in 2007.

9.4.2 Environmental and ESD indicators

Hunter Water achieved full compliance with respect to the requirements relating to monitoring, compiling data and reporting its performance against the environmental and ESD Indicators.

The requirements associated with the majority of the sub-clauses under clause 9.2, Environmental and ESD Indicators, namely the requirements associated with sub-clauses 9.2.2 to 9.2.6 and 9.2.9 do not occur within the audit period (i.e. findings of no requirement).

As more environmental and ESD indicator data is collected, Hunter Water should endeavour to provide comments on evident trends to allow comparison with previous year(s) data.

Hunter Water should ensure that when preparing the Annual Environmental and ESD Indicators report, the units of targets match those stated in the EMP.

9.4.3 Energy management

The requirements associated with Clauses 9.3.1 and 9.3.2 do not occur with the audit period (i.e. findings of no requirement).

Hunter Water advised that work with DEUS to establish rational energy savings targets is currently on hold following the cessation of the Energy Smart Business Program and pending clarification of the requirements for Hunter Water of the new Energy Administration Amendment (Water and Energy Savings) Act 2005.

It is Hunter Water's understanding that this Act will require preparation of plans to save energy, however the exact nature of the requirements is currently being determined.

Once clarification of the requirement of the new legislation is received, Hunter Water will be seeking to have revised clauses inserted into its Operating Licence in lieu of the current requirements based around the previous MoU with SEDA.

In the interim, Hunter Water will continue to seek justifiable energy saving initiatives and is currently working with its major energy supplier Country Energy and a number of energy management consultants to identify further sources of savings.

In relation to Clause 9.3.1, the audit notes that a licence amendment may be required due to a change in the ongoing relevance of SEDA.

In relation to Clause 9.3.2, Energy Efficiency is a specific section in the Hunter Water Annual Report.

9.5 Factors affecting compliance

No extraordinary events or factors affected Hunter Water's compliance with Part 9 of the Operating Licence during the audit period. No events or factors identified during the audit were predicted to affect Hunter Water's future compliance with Part 9 of the Operating Licence.

9.6 Recommendations

No recommendations are made regarding Hunter Water's compliance with Part 9 of the Operating Licence.

10. Catchment Management

10.1 Summary of findings

Hunter Water achieved **full compliance** for the following activities under the Operating Licence:

- reporting its catchment management activities in the 2004/05 Catchment Report
- reporting of five years water quality trends in the Williams River
- reporting of its activities conducted under the Hunter Water Corporation Limited (Special Areas) Regulation 2003, Williams River Catchment Regional Environmental Plan, Regional Planning Strategy and Seaham Weir Operations Plan
- reporting of other catchment, landcare or other supporting activities conducted by, or on behalf of, Hunter Water
- reporting its performance against its Water Management Licence and the *Dam Safety Act 1978*
- public display and accessibility of the Catchment Report

Hunter Water achieved **high compliance** for the following activity under the operating licence:

- reporting of bulk water quality.

10.2 Summary of requirements

This section of the audit report addresses clause 10.1 of the Operating Licence which relates to the Catchment Report and contains the following sub-clauses:

Clause 10.1.1 – Catchment Report: This clause sets out the requirements for a Catchment Report and reporting.

Clause 10.1.2 – Public Display of the Catchment Report: This clause sets out the requirements for the publication and display of the Catchment Report.

Clause 11.2.1 (f) requires that IPART or the auditor to investigate and report on Hunter Water's performance under Part 10 of the Operating Licence. This clause does not set requirements for Hunter Water but for IPART and/or the auditor. This section of the audit report addresses this clause of the Operating Licence.

Clause 10.1 of the Operating Licence requires Hunter Water to prepare a report known as the 'Catchment Report'. The specific details of what is required in this Catchment Report are specified in sub-clauses 10.1.1 and 10.1.2 of the Operating Licence.

Sub-clause 10.1.1 of the Operating Licence requires Hunter Water to report its performance against its catchment management activities. The sub-clause contains five parts that specify Hunter Water's requirements to report on:

1. Bulk water quality including monitoring of parameters identified in Clause 6.3.2 (b) and Schedule 3 of the Operating Licence. In total, this part requires monitoring of physical properties of the water, the presence of 10 residual pesticides, 22 chemical constituents and two radiological parameters,
2. Activities undertaken in accordance with statutory instruments:
 - < Hunter Water (Special Areas) Regulation, 2003 – imposing controls on the intensity of agriculture, sewage disposal, surface water activities on drinking water reservoirs and extraction of groundwater in all of Hunter Water's catchments
 - < Williams River Catchment Regional Environmental Plan – designed to protect and improve the environmental quality of the Williams River by establishing a co-ordinated and constituent approach to the planning and management of the natural and built environments within the Williams River catchment which spans Dungog and Port Stephens local government areas
 - < The Williams River Regional Planning Strategy (1997) – controlling land use through local environmental plans to manage new developments and protect river banks, and
 - < The Seaham Weir Operations Plan – designed to control the operation and maintenance of the Seaham Weir to ensure water levels and water extraction from the weir are controlled.
3. Performance against the levels of water extraction Hunter Water may take from surface and groundwater aquifer sources required by the Water Management Licence and the condition of its dams, ponds and detention basins under the *Dam Safety Act 1978*,
4. Water or land management activities undertaken within the catchment conducted by, or on behalf of, Hunter Water with the purpose of improving the catchment's ability to provide water of high quality, and
5. Five year trends observed in the Williams River against five specified key water quality indicator parameters and other routinely tested water quality parameters.

Sub-clause 10.1.2 of the Operating Licence requires Hunter Water to enable the public to access the Catchment Report by displaying the report on its internet website for people to be able to download the report from the website free of any charges imposed by Hunter Water. Hunter Water must also make the report available at its premises to be read or taken away free of any charges imposed by Hunter Water.

10.3 Details of compliance

Table 10.1: Catchment management – part 10 of operating licence

Clause	Requirement	Compliance	Findings
10.1	Catchment Report		
10.1.1	Hunter Water must report its performance against its catchment management activities, in a report to be known as the Catchment Report.	Full Compliance	<p>The 2003/04 Catchment Report was published on 1 September 2004 and falls within the 2004/05 period of this audit. The report was submitted to Hunter Water's Board of Directors at their 25 September 2004 meeting and signed minutes of the meeting have been sighted acknowledging receipt of the report.</p> <p>A draft copy of the report was made available to the auditor for viewing on 29 August 2005. The 2004/05 Catchment Report was placed on Hunter Water's website on 2nd September 2005.</p> <p>The final report contained sections that report on all aspects required by the Operating Licence. The level of reporting of particular clauses varies, although less than full compliance was only awarded in one instance. Details are provided in the descriptions of each clause.</p>

Recommendation arising from the 2003/04 Catchment Management Audit Report:

'Given the long lead time for the results arising from the Sustainable Groundwater Extraction Study, it is recommended that Hunter Water demonstrate currency with the Department of Infrastructure, Planning and Natural Resource's ongoing research and development into appropriate Groundwater Dependent Ecosystem indicators. Hunter Water should track the health of its own groundwater dependent ecosystems to the extent possible based on the information available on indicators developed by the Department of Infrastructure, Planning and Natural Resources and report on each of these by the end of each audit year. This action will demonstrate consistency with a high level of pro-activity in the pursuit of possible interim indicators.'

During audit interviews Hunter Water representatives stated that a set of groundwater monitoring specifications for the Sustainable Groundwater Extraction Study had been agreed to with the Department of Infrastructure, Planning and Natural Resources and a 12 month monitoring program was set to begin in September 2005. The study is due for completion in late 2007. A copy of the program for this study was sighted by the auditor.

The 2004/05 Catchment Report states that Hunter Water has reviewed the critical factors relating to groundwater extraction in a review of their Water Management Licence by the Department of Infrastructure, Planning and Natural Resources. The report states 'the critical factors listed by the Department of Infrastructure, Planning and Natural Resources are also regarded as important constraints by Hunter Water'.

Clause	Requirement	Compliance	Findings
			<p>The report also confirms that the Sustainable Groundwater Extraction Study is due for completion in late 2007. The 2003/04 audit indicated that the study would be completed in 2006. This delay was due to the time taken by the Department of Infrastructure, Planning and Natural Resources to provide groundwater monitoring specifications and for these to be agreed upon by Hunter Water.</p>
	<p>The Catchment Report must include:</p> <p>(a) the monitoring results obtained by Hunter Water against the Bulk water quality parameters required by clause 6.3.2 (b) and specified in Schedule 3;</p>	High Compliance	<p>The 2004/05 Catchment Report includes monitoring results for all of the nominated bulk water monitoring parameters listed in Schedule 3 of the Operating Licence, except PCB's.</p> <p>Hunter Water has not tested for PCB since 1999. During audit interviews a Hunter Water representative stated that PCBs are not tested for due to advice received from the Department of Health advising of changes to the range of pesticides typically tested for. Hunter Water could not provide evidence of this correspondence. However, the Hunter Water representative stated that PCB monitoring would occur at bulk water sites every quarter during 2005/06. Hunter Water stated that the reason for PCB testing to resume was the requirement for it under Schedule 3 of the Operating Licence. PCB testing is not required under the National Health and Medical Research Council's <i>Australian Drinking Water Guidelines 2004</i>.</p> <p>The results of radiological monitoring are included in the report. Radiological monitoring requirements are listed in the Operating Licence and were due for testing in the 2004/05 (groundwaters are tested every two years and surface waters every five years in accordance with the National Health and Medical Research Council's <i>Australian Drinking Water Guidelines 2004</i>.</p> <p>Full compliance could not be determined for this requirement as Hunter Water have not undertaken the full range of water quality testing at the Boags Hill take off point. Extractions from the Williams River at Boags Hill supply Grahamstown Dam, which is tested for the full range of water quality parameters listed in the Operating Licence. Hunter Water currently test for many of the parameters listed in the licence at this site. Real-time monitoring results from a fixed phosphorous and turbidity meter at Seaham Weir Pool are used to determine if conditions are appropriate for water transfers to Grahamstown Dam.</p>

Clause	Requirement	Compliance	Findings
			<p>Testing the Boags Hill take off point for the full range of water quality parameters was a primary recommendation of the 2003/04 audit, as the auditor highlighted that the Operating Licence definition for water storage includes works used for the extraction and storage of water in rivers and lakes. Therefore the Boags Hill take off meets the definition of a water storage and would require water quality monitoring of the parameters listed in Schedule 3 of the Operating Licence.</p>
Recommendation arising from the 2003/04 Catchment Management Audit Report:			
	<p><i>'Hunter Water has included the Boags Hill take off point where extractions are made to supply Grahamstown Dam in the reporting but has not taken any pesticide samples at this location and has sampled for only a subset of chemical analytes. It is recommended that Boags Hill be included in the full suite of chemical, pesticide and radiological analyses as there is potential for untested waters containing these contaminants to be introduced into Grahamstown Dam. Testing should coincide with periods surrounding extraction from the Williams River at Boags Hill where this water is intended for storage within Grahamstown Dam and should be reported in future audit reports'.</i></p>		<p>Hunter Water has considered the recommendation, but has chosen not to implement it. A written response from Hunter Water regarding the draft 2003/04 audit was provided to the auditors. It states that Hunter Water believe that as water quality monitoring is based on 'Australian Drinking Water Guidelines' and that water extracted at Boags Hill is tested for the full range of chemical, pesticide and radiological analytes when it is stored in Grahamstown Dam, and accordingly the Boags Hill extraction point should not be tested for the full range of analytes listed in the Operational Licence.</p> <p>The 2004/05 Catchment report states that <i>'Pesticide testing focused on Hunter Water bulk storages and aquifers (rather than the Williams River) as these provided a more representative and relevant sample to the Corporation's water treatment operations'</i>. The report also states that <i>'Hunter Water has developed a range of management strategies to deal with the observed variability in flow and water quality in the Williams River and impact on water transfers to Grahamstown Dam, these processes include intensive in-river quantity and quality monitoring programs linked with a selective extraction protocol'</i>.</p> <p>A recommendation to test the Boags Hill take-off point for the full range of analytes listed in the Operating Licence was repeated in the draft 2004/05 audit report, which was provided to Hunter Water and IPART for comment. Hunter Water provided the auditors with a written response to the draft audit which states:</p> <p><i>"The draft audit report makes comment that compliance against monitoring requirements for bulk water could not determined as the full range of bulk water monitoring parameters were not tested at Boags Hill and states that as Boags Hill meets the definition of a water storage under the definition of the Operating Licence that monitoring must take place at Boags Hill.</i></p>

Clause	Requirement	Compliance	Findings
			<p><i>Hunter Water does not agree with this interpretation of the Operating Licence. Although the definition of a water storage under the Licence does include the works used to extract water from rivers, the requirements for monitoring relates to bulk water (i.e. water held in water storages as defined under the Licence) and does not specify at what point in the storage monitoring must take place. As has been previously explained and documented, it is more operationally relevant for HWC to monitor for the schedule 3 chemical, pesticide and radiological parameters in Grahamstown raw water. Due to the time required to obtain results from tests for heavy metals, pesticides and radiological parameters it is not possible to use the results of analysis for these parameters in making a decision on whether to pump from the Williams River. It is more practical and meaningful to monitor for these parameters in Grahamstown raw water. Water stored in Grahamstown meets the definition of bulk water under the Operating Licence. Therefore, monitoring for the specified schedule 3 parameters in Grahamstown raw water meets the monitoring requirements for bulk water under the Licence.</i></p> <p><i>The highest water quality risk to Grahamstown dam is nutrient enrichment leading to problematic algal blooms. Phosphorus has been identified as the key control nutrient to reduce overall algal biomass. Measures to reduce phosphorus accumulation would also target nitrogen to some extent. Reducing nitrogen without reducing phosphorus could lead to nitrogen fixing forms of cyanobacteria such as Anabaena becoming dominant. Saxitoxins produced by Anabaena have been historically of greater concern to HWC, as a drinking water supplier, as these are much more problematic to remove than other types of toxin (though recognising that the actual human health risk is lower). Phosphorus monitoring at Boags Hill has been a priority since 1994.</i></p> <p><i>All water extracted from the Williams River is stored in Grahamstown dam. Therefore heavy metal, pesticide and radiological monitoring at Boags Hill is considered of lower priority as routine monitoring for these parameters is undertaken in Grahamstown raw water in compliance with the recommendations of the Australian Drinking water Guidelines. Operationally the risk from such contaminants to our customers is addressed by HWC's multi barrier approach to water quality including regular monitoring of water quality at the source, maintenance of a closed water distribution system, a high level of water treatment and working with the community and other</i></p>

Clause	Requirement	Compliance	Findings
			<p><i>stakeholders to help protect the quality of our natural water sources.</i></p> <p><i>HWC still considers that the expenditure of additional resources for adopting the recommendation to undertake the full suite of chemical, pesticide and radiological analysis at Boags Hill."</i></p> <p>The auditor concurs with Hunter Water's statement that implementing the recommendation would be of little operational value to Hunter Water, as the testing results for the additional analytes listed in the licence could not influence the decision to pump from the site, due to testing timeframes. However, testing for heavy metals, pesticides and radiological analytes at the Boags Hill take-off point is likely to provide an enhanced basis on which Hunter Water can determine risk and better factor risk into its decision making with respect to the extraction of water from the Boags Hill take-off point.</p>
	<p><i>'Given the likely introduction of water quality influences resulting from first flush events, it is recommended that Hunter Water instigate a rain event water quality sampling program to strengthen the existing routine sampling regimen and report the criteria for rain event sampling in the 2004/05 Catchment Report.'</i></p>		<p>Hunter Water has considered the recommendation, but has chosen not to implement it. A written response from Hunter Water regarding the draft 2003/04 audit was provided to the auditors and states that <i>'Hunter Water believes the program it has in place is the most appropriate and questions the benefit of rain event sampling in this instance'</i>.</p> <p>Hunter Water operate a real-time phosphorous and turbidity monitoring station at the Seaham Weir Pool. Hunter Water use the results obtained by this station to determine if conditions are appropriate for pumping water into Grahamstown Dam. In their written response to the draft 2003/04 audit, Hunter Water state that <i>'Given the likely run around time for other parameters, it could be that an opportunity to pump is missed in waiting for results'</i>.</p> <p>During interviews, a Hunter Water representative stated that a wet weather Giardia/Cryptosporidium monitoring program had run during 2004/05 at the Boags Hill extraction point, although no details of this program were reported in the 2004/05 Catchment Report. Results of this program were made available to the auditors. The results indicate that testing occurs monthly unless triggered by a rain event. No Cryptosporidium or Giardia was detected during the 2004/05 audit year.</p> <p>Although the real-time phosphorous and turbidity monitor would indicate rain-event stormwater impacts at the Boags Hill extraction site, this monitor would not assess thermotolerant coliform contamination which can be associated with stormwater in some catchments.</p>

Clause	Requirement	Compliance	Findings
			It is recommended that Hunter Water undertake a risk assessment of thermotolerant coliform contamination for all catchments following significant rain events. A rain-event triggered faecal coliform sampling program should be implemented depending on the outcome of the risk assessment.
	<i>'Given the long term trending benefits of biological assay with respect to catchment health, Hunter Water should consider initiating biological assay of key waters and report progress and rationale for its decision in the 2004/05 Catchment Report.'</i>		<p>In respect of this previous recommendation, Hunter Water has responded as follows:</p> <p><i>'Hunter Water believes that undertaking biological assays to determine catchment health is beyond the scope of our responsibilities. Hunter Water considers DNR the resource owner for the Williams River and is the more appropriate agency to undertake biological assay work in the river. Therefore, Hunter Water has not provided any resources for undertaking biological assay work during 2004/05.'</i></p>
	(b) details of activities conducted by Hunter Water under the Hunter Water Corporation Limited (Special Areas) Regulation 1997, Williams River Catchment Regional Environment Plan, Regional Planning Strategy and Seaham Weir Operations Plan;	Full Compliance	<p>Hunter Water has reported on all activities conducted under the planning instruments listed in the Operating Licence in the 2004/05 Catchment Report. This includes:</p> <ul style="list-style-type: none"> Inspections and maintenance of the existing Seaham Weir fishway, remedial works on floodgate structures and removal of woody vegetation along Seaham Weir rock embankment in accordance with the Seaham Weir Operating Plan. Investigation of the need for fish passage between Williams River and Grahamstown Dam under the Williams River Catchment Regional Environmental Plan and Regional Planning Study. <p>Provision of comments to relevant authorities in relation to development applications for proposals within the areas prescribed in the Hunter Water Special Areas Regulation. During 2004/05 Hunter Water provided comment on five development, subdivision and re-zoning applications, including an application for a racing circuit and drag racing strip development at Balickera. Hunter Water has submitted three representations to Port Stephens Council since 2003 opposing that development, as the Corporation believes the development poses some risk to drinking water supplies.</p>

Clause	Requirement	Compliance	Findings
Recommendation arising from the 2003/04 Catchment Management Audit Report:			
	<p><i>'Hunter Water relies on passive methods to restrict recreational water users' access to reservoirs. It is recommended that Hunter Water take the opportunity to undertake a proactive review of access to Seaham Weir and access to other water storage reservoirs and that the outcomes of this review be reported in the next audit. Reporting should include where relevant, strategies identified and any actions taken to manage access. This may include the use of physical barriers and other pro-active measures for water resources under its control and entering into agreements or understandings (consistent with Clause 3.3.4 of the Operating Licence) with those bodies vested with the power to restrict access.'</i></p>		<p>A written response from Hunter Water regarding this issue was provided to the auditors and states that <i>'Under the Hunter Water Special Areas Regulation, Hunter Water has no powers in terms of restriction of access to reservoirs and Seaham Weir'</i>. The letter goes on to state that Hunter Water has complete control of some areas, such as Chichester Dam, due to its land ownership rights and that the recommendation should be removed from the final audit report.</p> <p>During audit interviews, Hunter Water representatives revealed that a specific review of public access to Seaham Weir and other reservoirs had not been undertaken. Public access to reservoirs is not commented on in the 2004/05 Catchment Report, however, Hunter Water representatives revealed that several attempts to restrict public access to these areas have been made in the 2004/05 audit year. These included:</p> <ul style="list-style-type: none"> ▪ A proposal to upgrade fencing around reservoirs to structures like that used by the RAAF. To date, a 400 metre section of fencing adjacent to the Williamstown RAAF base has been approved for this upgrade. ▪ Correspondence with NSW Police to arrange a blitz on illegal trail-bike riders in catchment areas (two representations were made to which the Police have not responded).
	(c) details of Hunter Water's performance against the Water Management Licence and the Dam Safety Act 1978;	Full compliance	<p>The 2004/05 Catchment Report contains sections reporting on Hunter Water's performance against the Water Management Licence and the Dam Safety Act.</p> <p>A 5-yearly review of the Water Management Licence was conducted by the Department of Infrastructure, Planning and Natural Resources and Hunter Water during 2003. The revised licence was issued 25 June 2004.</p> <p>This audit covers the period of 2003/04 for which Hunter Water was operating under the 2004 Water Management Licence.</p>
	Water Management Licence (2004)		<p>The 2004/05 Catchment Report includes details of the review of the Water Management Licence. The major outcomes of the review are:</p> <ul style="list-style-type: none"> ▪ Redrafting of the groundwater access conditions to reflect the Tomago-Tomaree-North Stockton Water Sharing Plan, which became operational on 1 July 2004.

Clause	Requirement	Compliance	Findings
			<ul style="list-style-type: none"> ■ A requirement for Hunter Water to examine options for mitigating the ecological impacts of environmental flow releases from Chichester Dam. ■ A requirement for Hunter Water to determine a sustainable groundwater extraction strategy. ■ The ongoing development of surface water access rules for the lower Williams River. <p>The 2004/05 Catchment Report also gives details of non-compliances of water quality results against the licence requirements. The report identifies the following non-compliances:</p> <ul style="list-style-type: none"> ■ Dissolved oxygen levels fell below licence guideline targets for January, February, March, April and May at Chichester Dam. ■ Routine water quality sampling was not conducted at the Williams River at Clarence Town for the month of September 2004. This was caused by confusion amongst the parties responsible for obtaining the samples and was addressed within Hunter Water to ensure it did not occur again. <p>Hunter Water provided the auditors with copies of correspondence from the Department of Infrastructure, Planning and Natural Resources regarding both issues and in both cases the Department considered the incidents to be minor and requiring no further action.</p>
	<i>Dam Safety Act, 1978</i>		<p>Hunter Water has four assets which are prescribed structures under the Dams Safety Act 1978. These are Chichester Dam, Grahamstown Dam, Winding Creek detention basin and Dora Creek effluent pond. However the Dora Creek effluent ponds were de-prescribed in 2004.</p> <p>A new spillway outlet channel at Grahamstown Dam began construction in April 2004. The new spillway, in conjunction with a temporary bund wall upstream of the spillway structure, enables the top water level of the dam to be increased by one metre and ensure full compliance with the Dam Safety Act 1979. Hunter Water report that some of the understorey vegetation clearing associated with the project was completed in the 2004/05 year and additional lantana clearing was also conducted around the dam embankment.</p>

Clause	Requirement	Compliance	Findings
			<p>A development application was lodged with Lake Macquarie Council for the upgrade of the storage capacity of the Winding Creek detention basin in 2003. Hunter Water submitted a response to Council regarding concerns with the development application in Oct 2004 and in May 2005 received a request for further information regarding details of construction and issues with local residents. Hunter Water reports that they are currently preparing a second submission to Council to clarify these issues.</p>
	(d) other catchment, landcare or other supporting activities conducted by or on behalf of Hunter Water; and	Full Compliance	<p>The 2004/05 Catchment Report includes sections on Hunter Water's involvement with catchment, landcare and other supporting activities within the 2004/05 audit year.</p> <p>Catchment improvement activities that Hunter Water began before the 2004/05 year include:</p> <ul style="list-style-type: none"> ▪ Routine monitoring of Bandon Grove fishway to ensure the low flow channel is clear and there is no visible scouring of the rock armouring. ▪ Incorporation of the findings of site condition reports into the rental leases for properties owned by Hunter Water adjoining Chichester Dam and at Tillegra. A site condition report was prepared for one property and incorporated into the tender for the lease, which was advertised in the 2004/05 year. ▪ Maintenance of a best practice land management demonstration site in the lower Williams River catchment. The demonstration was established during 2003/04 and is planned for 4 years duration. ▪ Maintenance of the Balickera Canal Revegetation project's previously planted trees, which involved spreading mulch around 700 metres of plantings. ▪ Monitoring of the Balickera Tunnel during water transfers that would result in high water levels, which might impact on a colony of bats living in the tunnel. ▪ Participating in an intensive feral animal control program in National Parks, Crown Land, catchment areas, RAAF land and private land during the 2004/05 year which was co-ordinated by the Rural Land Protection Board. Additional animal control operations were undertaken by Hunter Water rangers at Tomago Sandbeds and along Balickera Canal.

Clause	Requirement	Compliance	Findings
			<ul style="list-style-type: none"> Producing funding for projects undertaken by various landcare groups during 2004/05. These included Maitland, Kurri, Congewai Valley, Galgabba, Shortland to Wallsend, Allambie Gardens Reserve, Kooragang, Thursday Mob and Warada landcare groups. Funding was also provided to the Williams River Care Association. Managing water hyacinth and alligator weed through routine spraying of glyphosphate and metsulfuron-methyl respectively, in accordance with Hunter Water's Department of Environment and Conservation Operational Licence. A non-compliance against the Department of Environment and Conservation Operational Licence occurred during the 2003/04 audit year, when a glyphosphate concentration greater than the drinking water guidelines was detected in raw water following spraying for water hyacinth. Hunter Water has since changed the brand of glyphosphate it uses in order to reduce the possibility of another licence breach. The incident was not reported in the 2003/04 Catchment Report as Hunter Water uses their Annual Report for DEC licence reporting, and the incident fell outside that years licence reporting period. <p>New catchment improvement activities reported in the 2004/05 Catchment Report include:</p> <ul style="list-style-type: none"> The rehabilitation of Grahamstown Dam borrow pits, which are earth pits created from the excavation material used in the dam's original embankment. Of the four pits remaining, one was fully rehabilitated in late 2004, one is being monitored for erosion, one has been 'naturally' rehabilitated through erosion and natural revegetation and one was removed during late 2004 to form a new access road to the embankment. The Balickera Canal Noxious Weeds Management Plan was developed during 2004 year. The plan was developed in conjunction with local residents, Port Stephens Council and the Hunter and Central Rivers Catchment Management Authority.

Clause	Requirement	Compliance	Findings
Recommendation arising from the 2003/04 Catchment Management Audit Report:			
	<p><i>'Whilst Hunter Water's contributions to broader catchment management initiatives appear to be of benefit to the catchment, there appears to be limited statusing, measurement, structure and co-ordination of these activities by Hunter Water. In many cases Hunter Water is a 'silent partner' in the initiatives providing financial or in-kind support to the programs led and coordinated by other stakeholders within the catchment (principally the Hunter Catchment Management Authority). These initiatives do not always reflect Hunter Water's priorities with respect to the protection of drinking water supply.'</i></p>		<p>The 2004/05 Catchment Report includes the details of catchment management initiatives undertaken with many stakeholders, which include the Department of Infrastructure, Planning and Natural Resources, Councils, landholders and landcare group members, among others.</p> <p>In a written response to this issue, Hunter Water states:</p> <p><i>"Hunter Water believes that coordinating catchment management activities is beyond the scope of our responsibilities. Hunter Water is not a catchment management authority, this responsibility rests with DNR and the newly formed CMA's. Where appropriate and directly related to our operations HWC does take undertake pro-active catchment management measures. For example Hunter Water has undertaken work as part of the Natural Restoration Strategy for Chichester Dam. Initial restoration works were undertaken during 2004, which included the removal of weed species and seed collection for future propagation. The project also involved the removal of weed species from high use areas and the restoration of these areas through planting native trees, shrubs and grasses.</i></p> <p><i>An initial trial focused on three short term sites. The project was expected to run over 2004 and 2005. Funding of \$16,000 has been allocated as capital expenditure. A detailed study of the area will also be prepared to identify long term management options and restoration works that would be beneficial to the Chichester Dam area. It is proposed to engage contractors to undertake these works.</i></p> <p><i>HWC participates in Catchment Management Forums and liaises with Department of Planning, DNR and local Councils who are responsible for land use planning within the catchment. Accordingly, we request that you delete this recommendation."</i></p>
	<p><i>'The auditor recognises that effective catchment management requires central planning and coordination and does not propose duplication of this function. However, it is recommended that Hunter Water consider taking a more active role in this process and define and report on the initiatives undertaken with respect to Catchment Management'.</i></p>		<p>The 2004/05 Catchment Report includes the details of catchment management initiatives undertaken with many stakeholders, which include the Department of Infrastructure, Planning and Natural Resources, Councils, landholders and landcare group members, among others.</p> <p>Hunter Water representatives stated during audit interviews that due to limited resourcing, Hunter Water was not in a position to act as a co-ordinator of catchment improvement initiatives and that the various catchment management committees were in a better position to do so.</p>

Clause	Requirement	Compliance	Findings
	<i>'Hunter Water should report on the risks posed to the catchment and the actions/initiatives being undertaken to address such risks. This reporting is to include a definition of the expected specific outcomes of what the initiative will do for the catchment/Hunter Water, how this will be measured, what the interim results are and suggested inputs back to the manager of the initiative (Hunter Water or other) on how the initiative can be improved/adjusted to most effectively achieve beneficial outcomes for the catchment and Hunter Water.'</i>		<p>During audit interviews, Hunter Water representatives stated that a risk assessment of existing and future catchment activities was beyond the scope of the organisation's responsibilities and resources.</p> <p>However, Hunter Water did initiate a meeting with Port Stephens Council and the Department of Infrastructure, Planning and Natural Resources regarding Hunter Water's concern about the rapid growth within groundwater catchment zones in Port Stephens. A meeting was held on 21 April 2005 with these organisations, in which Hunter Water discussed opportunities to improve groundwater protection in these areas.</p> <p>The auditor sighted the minutes for this meeting and the initial correspondence regarding the issue. This initiative was not reported in the Catchment Report.</p>
	<i>'It is recommended that Hunter Water review the timing of its laboratory reporting to ensure rapid turn around of results on water quality samples taken following herbicide spraying to enable the earliest possible warning of contamination so that procedures to prevent pumping can be put in place. Hunter Water should also ensure that any exceedances which fall within the period covered within the audit year are reported in the Catchment Report for that year.'</i>		<p>During audit interviews, Hunter Water representatives stated that a review of laboratory reporting was not considered necessary as laboratory turn-around times were considered timely and adequate.</p> <p>Hunter Water provided comment on this recommendation in a written response to the draft 2003/04 Audit Report which states <i>'Hunter Water has protocols in place to turn Balickera pumps off with appropriate tagging to prevent operation of pumps until appropriate water quality results are obtained following spraying'</i>. The letter requested that the finding and recommendation be deleted.</p>
	<i>'It is recommended that the 2004/05 audit of the Operating Licence investigate the degree to which catchment issues are specifically raised and addressed at the six monthly meetings with Lake Macquarie Council, Port Stephens Council and Cessnock City Council and the extent these are reported in the Catchment Report.'</i>		<p>The 2004/05 Catchment Report does not specifically mention Hunter Water's six-monthly meetings with the various Councils associated with its catchment area and this is not a licence requirement.</p> <p>Minutes for a meeting held on 19 July 2004 between Port Stephens Council and Hunter Water were provided to the auditor and indicated that the purpose of such meetings were to discuss strategic planning issues. This includes environmental issues associated with catchment areas.</p>
	<i>'It is recommended that Hunter Water investigate and report on measures used to deter illegal entry and intrusion of catchment areas in future reports and report on pro-active strategies to protect key assets such as pump stations.'</i>		<p>Hunter Water does not report on measures used to deter illegal entry and intrusion to catchment areas, or any pro-active strategies to protect such areas or other key assets. However Hunter Water have been proactive in improving security by instigating a police blitz on illegal trail-bike riding in catchment areas, proposing to upgrading fencing and initiating discussion with other regulatory bodies with the aim of improving groundwater catchment area protection in Port Stephens local government area.</p>

Clause	Requirement	Compliance	Findings
	<p>(e) five year water quality trends in the Williams River (at Hunter Water's monitoring point adjacent to Seaham Weir) against the following parameters:</p> <p>(i) total phosphorus</p> <p>(ii) total nitrogen</p> <p>(iii) thermotolerant coliforms</p> <p>(iv) chlorophyll-a</p> <p>(v) turbidity</p> <p>(vi) other parameters as routinely tested and measured by Hunter Water.</p>	Full Compliance	<p>The 2004/05 Catchment Report includes five-year water quality trends for the required water quality parameters and twelve other routinely monitored parameters. Long term water quality trends are also given for 1987-2005.</p> <p>All trends are graphed showing trend lines under parametric and non-parametric statistical analyses and were reported in terms of statistical significance.</p> <p>The report reveals significant five-year trends for total phosphorous and three other parameters not specified in the licence. Significant long-term trends are also reported for total phosphorous, total nitrogen and eight other parameters not specified in the licence.</p> <p>Both the 2002/03 and the 2003/04 audits reported that marginal increases in total phosphorous and turbidity had been reported in five year and long-term trend analyses and Hunter Water could not provide an explanation for this. The trend continued into the 2004/05 year with a significant increase in total phosphorous and a slight increase in turbidity. The 2004/05 Catchment Report suggests that this trend is related to increased sedimentation of the waterway, as phosphorous is often associated with sediment particles and turbidity is an indicator of sedimentation. However, the report also states that non-filterable residue (another indicator of sedimentation) shows a falling trend since 2000 and increasing levels of chlorophyll-a (an indicator of algal growth), which would be expected with increasing levels of phosphorous, are not recorded.</p> <p>Changes in the significant long term increasing trend in copper levels are discussed and sources of copper are also suggested.</p> <p>The report also discusses differences in the trends for all forms of nitrogen, for which some show conflicting trends between the medium and the long term. Reasons for the trends are not discussed, however, it is noted that changes in cyanobacterial populations which were observed in the lower Williams River during the 2004/05 year do not reflect the reported falling nitrogen levels, and the reasons for this are unknown.</p> <p>Causes for other significant water quality trends are not investigated in the 2004/05 Catchment Report.</p>

Clause	Requirement	Compliance	Findings
Recommendation arising from the 2003/04 Catchment Management Audit Report:			
	<i>'The audit identified that the statistically significant differences identified in the statistical analysis and trending of water quality data over both five year and long term periods were largely unexplored. It is recommended that in future audits, Hunter Water investigate the physical, chemical and other interactions occurring in the catchment to provide greater explanation on the implications to the quantity of bulk water and the health of the catchment for all significant trends both positive and negative that are observed in the data (five year and long term).'</i>		<p>The 2004/05 Catchment Report identifies statistically significant trends in water quality parameters in the Williams River over both a five year and long term period. However, it does not explore the causes for many of these trends.</p> <p>In a written response regarding this issue, Hunter Water states:</p> <p><i>'It is very difficult to determine the actual cause for any trends in water quality, especially given that there has been little physical change within the catchment over the period of data collection'.</i></p>
10.1.2	Hunter Water must also publicly display the report on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.	Full Compliance	<p>The 2003/04 Catchment Report was available on Hunter Water's website.</p> <p>The reports are available for downloading free of charge. Customer service staff at Hunter Water's offices stated that a hard copy of the report could be produced upon request, free of charge.</p>
Recommendation arising from the 2003/04 Catchment Management Audit Report:			
	<i>'It is recommended that Hunter Water consider the merit of placing one hard copy of the Catchment Report for public viewing at each Customer Centre so that these can be viewed immediately by interested persons. In addition, Hunter Water may provide public internet access at its Customer Centres to allow free and immediate public access to reports that are to be made available on-line.'</i>		<p>In a letter of response to this issue, Hunter Water states:</p> <p><i>'Hunter Water does not concur with recommendations to provide public internet access at its Customer Centres. There are concerns with access to inappropriate sites, computer access and security. Hunter Water ensures that a copy of the report is available at its premises for access and collection free of charge. In addition, Hunter Water is happy to post a hard copy of the report to an individual/business. We, therefore, request that this recommendation be removed.'</i></p>

10.4 Discussion

Hunter Water has substantially met the requirements of Part 10 of the Operating Licence in the 2004/05 audit year.

10.5 Factors affecting compliance

No extraordinary events or factors affected Hunter Water's compliance with Part 10 of the Operating Licence during the audit period. No events or factors identified during the audit period were predicted to affect Hunter Water's future compliance with Part 10 of the Operating Licence.

10.6 Recommendations

10.6.1 Key recommendations

A key recommendation of the 2003/04 Audit Report was that Hunter Water should provide greater explanation for the causes and implications of five-year and long-term water quality trends. The 2004/05 Catchment Report provides explanation for some water quality trends, although most are not included. The report does not discuss the implications of these trends on catchment health or bulk water quality. It is recommended that Hunter Water:

- R10.1** Provide a consistent explanation of all statistically significant water quality trends in future Catchment Reports. If the causes of such trends are unknown, this should be stated.

10.6.2 Secondary recommendations

As reported in the 2003/04 Audit Report, Hunter Water has included the Boags Hill take-off point where extractions are made to supply Grahamstown Dam in the sampling sites but has not taken any pesticide samples at this location and has sampled for only a subset of chemical analytes. It is recommended that in order to gain a better understanding of risk when utilising this water supply source that Hunter Water:

- Include this site in the full suite of chemical, pesticide and radiological testing and analysis as required for Bulk water as specified in Schedule 3 of the Operational Licence.

Although the real-time phosphorous and turbidity monitor located at the Boags Hill take-off would indicate rain-event stormwater impacts on water in the Williams River, this monitor does not assess thermotolerant coliform contamination which can be associated with stormwater in some catchments. Accordingly, it is recommended that Hunter Water:

- Undertake a risk assessment of thermotolerant coliform contamination for all catchments following significant rain events. A rain-event triggered thermotolerant coliform sampling program should be implemented depending on the outcome of the risk assessment.

Water hyacinth has been successfully managed through routine spraying of glyphosphate in accordance with Hunter Water's DEC licence. A non-compliance against the licence occurred during the 2003/04 audit year, when a glyphosphate concentration greater than the drinking water guidelines was detected in post-treatment water. Hunter Water has since changed the brand of glyphosphate it uses in order to reduce the possibility of another licence breach. It is recommended that Hunter Water:

- Investigate alternatives to the use of glyphosphate for the control of water hyacinth. Such control measures could include physical or mechanical harvesting and/or biological control organisms such as *Neochetina* weevils or *Niphograpta* and *Xubidia* moth species.

11. Complaint and Dispute Handling

11.1 Summary of findings

Hunter Water has achieved **full compliance or high compliance** in relation to all clauses of the Operating Licence associated with complaint and dispute handling.

During the 2005/06 audit period Hunter Water will introduce a new Customer Information System (CIS), new telephony system and upgrade other major business systems. Whilst a settling in period is anticipated, a significant positive impact from these systems is expected in the 2006/07 audit period. The procurement, customisation and planning for implementation, training and change management processes related to these new systems has consumed significant resources. The recommendations regarding training for Complaints Handling have not been addressed in 2004/05, however increased functionality and planned training on new systems will allow improvements to be made and outcomes for customers are expected to show related improvement in future audits.

The Energy and Water Ombudsman NSW (EWON) continues to provide external dispute resolution services to Hunter Water in a manner which complies with the Licence. The majority of complaints received by EWON have been satisfactorily resolved.

11.2 Summary of requirements

Part 12 of the Licence specifies requirements relating to complaint and dispute handling. The key requirements in this part (omitting the definitional clauses) are:

- **Clause 12.1 – Dispute handling procedures:** This clause covers procedures for handling internal complaints, dissemination of information about these procedures and reporting about complaints.
- **Clause 12.2 – External Dispute Resolution Scheme:** This clause covers the establishment, mode of operation, information dissemination, review and reporting about external resolution scheme.
- **Clause 12.3 – Complaints to other bodies:** This clause requires a report on complaints made to courts or tribunals.
- Comment on any submissions received by IPART regarding Hunter Water's complaint and dispute handling processes (no submissions were received for 2004/05).

Clause 11.2.1(h-k) requires IPART or the auditor to investigate and report on Hunter Water's on-going compliance with its Customer Contract, code of practice for debt and discontinuity, the effectiveness of complaints handling procedures and complaints made against Hunter Water in a court or tribunal. This section of the audit report addresses these clauses of the Operating Licence.

11.3 Details of compliance

Table 11.1:: Complaint and dispute handling – Part 12 of operating licence

Clause	Requirement	Compliance	Findings
12.1.	Internal Complaint Handling Procedures		
12.1.1	Hunter Water must establish internal complaints handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Hunter Water.	Full compliance	Community Relations Policy 12, Complaints Management, created in 1997, was updated in February 2003. Reports were sighted and work at the Contact Centre observed. Both demonstrated that Hunter Water is receiving, responding to and resolving complaints.
12.1.2	The internal complaints handling procedures of Hunter Water must be based on the Australian Standard AS4269 -1995 Complaint Handling.	Full compliance	Policy 12, Complaints Management outlines the internal complaints procedures. The Policy is based on the Australian Standard. It was last updated in February 2003. There were no recommendations in relation to this policy in the 2002/03 audit.
12.1.3	Hunter 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	<p>A pamphlet about the internal complaints handling procedure ("Resolving Customer Disputes") is available at Customer Centres and on Hunter Water's website. The pamphlet is mailed annually with customer bills and was sent in the billing cycle commencing November 2004.</p> <p>It states that interpreter services are available but this statement is not made in other languages as it is on the pamphlet about the customer contract.</p> <p>There are three ways of making complaints. These are by telephone, in person at a Customer Centre and in writing by email or by letter. The 2003/04 audit noted that complaints handling information is on the website but is difficult to find. No changes have been made to the website in 2004/05, however Hunter Water advised that a contract is currently being let for services to upgrade the website. The work is expected to be completed by the end of 2005.</p>

Clause	Requirement	Compliance	Findings
12.1.4	Hunter Water must provide information of the nature described in clause 12.1.3 to Customers and Consumers through their bills at least once each year. Hunter Water may provide this information in the pamphlet referred to in clause 12.2.6.	Full compliance	Information was sent to all customers in bills in the cycle commencing November 2004.
12.1.5	The Customer complaint handling, complaint resolution process and Customer redress provided to Customers under the Customer Contract must be reviewed and amended where necessary by Hunter Water to ensure that it is based on the Australian Standard AS4269-1995 Complaint Handling.	High compliance	<p>The policy (Policy 12) was reviewed in February 2003 to better address the Australian Standard, no changes were made during 2004/05.</p> <p>Hunter Water's complaint handling and resolution processes generally follow the requirements of AS4269. Hunter Water advised that the introduction of a new Customer Information System (CIS) is scheduled for March 2006, and will improve the recording and reporting processes for complaints</p> <p>The 2003/04 audit highlighted the areas of Training and Resources as not providing full compliance with the requirements of AS4269. Very little has changed in these areas during 2004/05 due to significant resources being dedicated to the planning and implementation of the new CIS.</p>
12.1.5		High compliance	<p>Training – Generally training on complaints handling has been put on hold during 2004/05 in anticipation of introduction of the new CIS. Significant efforts are being devoted to planning staff training and change management for the introduction of the CIS in early 2006. The auditor expects that this area will show significant improvement in subsequent audits.</p> <p>Hunter Water also noted that the HR systems will also be upgraded as part of the business wide IT upgrades and will provide improved ability to record, track and schedule training of staff in specific areas of the business.</p> <p>Resources - The Case Investigation team has been established during 2004/05 which provides dedicated resources to handling customer complaints. Although response times have increased compared with 2003/04, Hunter Water advises that the team have improved complaints handling and responsiveness to customers.</p>

Clause	Requirement	Compliance	Findings
			<p>The telephone system has also placed some limitations on Hunter Water's ability to manage customer calls. Replacement of this system when Hunter Water relocate to their new premises in early 2006 should improve the process for receiving and handling customer calls and complaints.</p> <p>Customer complaints, once received, are passed on to the Case Investigations Group to manage, including co-ordination of internal investigations and contact with the customer. A monthly report on complaint numbers, trends and other relevant matters is provided to the General Manager, Community Relations and the Managing Director. High-level statistics are provided to the Board each month. Any trends/opportunities for improvement identified are followed through by the Case Investigations Group.</p>
12.1.6	<p>Hunter Water must report on the following details concerning complaints made against Hunter Water which are handled by its internal complaints handling procedures:</p> <p>(a) the number and types of complaints received on a month by month basis, classified by Suburb into one or more of the following categories:</p> <p>(i) water quality, including health and aesthetic parameters;</p> <p>(ii) continuity of water supply;</p> <p>(iii) water pressure;</p> <p>(iv) sewage overflow;</p> <p>(v) sewage odour;</p> <p>(vi) drainage services; and</p> <p>(vii) customer billing.</p>	Full compliance	<p>Hunter Water has provided a report to IPART – Internal Complaints – Performance 2004-05 – Report to IPART – August 2005. The report includes a spreadsheet attachment which provides the monthly complaints information classified by suburb and categorised by complaint type as required by Clause 12.1.6 (a).</p>
	<p>(b) the number and type of complaints resolved or not resolved (on a month by month basis) in sufficient detail and using sufficient classifications to enable IPART to gain a reasonable understanding of how and how well those complaints were resolved or why complaints were not resolved, as the case may be; and</p>		<p>The spreadsheet attachment to the IPART report provides the detailed categorisation of complaints and also lists the number of complaints resolved and unresolved each month. The report does not explain how and how well complaints were resolved or discuss why some complaints were not resolved.</p>

Clause	Requirement	Compliance	Findings
			Hunter Water has addressed this aspect by providing a summary of complaints, trends by category and detailing some of the incidents resulting in large volumes of complaints in specific areas. The report does not state why some complaints were not resolved at the end of each month. Hunter Water advised that a number of the complaints that are unresolved at the end of a month are simply complaints that have been received towards the end of the month where there has been insufficient time to resolve the matter. In other cases they may relate to issues that require system investigation that may take time. Ultimately all complaints are resolved in line with the definitions in the Customer Contract.
	(c) any problems of a systemic nature arising from the complaints.	Full compliance	The report to IPART describes a range of incidents that generated complaints and describes the underlying cause of these complaints. In some cases these causes can be addressed by Hunter Water through changes to their assets, systems, or processes and if this is the case information is provided in the report.
12.2.	External Dispute Resolution Scheme		
12.2.1	Within 1 month of the commencement date, Hunter Water must establish a Dispute Resolution Scheme for the resolution by a Dispute Resolution Body of disputes between Hunter Water and its Customers and between Hunter Water and Consumers of the nature described in 12.2.3.	No Requirement	Hunter Water is a member of the Energy and Water Ombudsman of NSW (EWON) and utilises the services of EWON for external dispute resolution. This requirement was satisfied in a previous audit.
12.2.2	The Dispute Resolution Scheme so established by Hunter Water is subject to the Minister's approval.	No Requirement	Approved by the Minister as demonstrated by media release dated 12 June 2002.
12.2.3	<p>The Dispute Resolution Body is to hear disputes relating to complaints made by Customers and Consumers in relation to the following issues:</p> <ul style="list-style-type: none"> (a) water quality, including health and aesthetic parameters; (b) continuity of water supply (c) water pressure (d) sewage overflow 	Full Compliance	<p>Hunter Water has prepared a report to IPART detailing the interaction with EWON for external complaints handling during 2004/05.</p> <p>The report demonstrates that EWON has heard disputes in many of the categories listed in Clause 12.2.3 and also a number of other categories have been defined by Hunter Water and detailed in the report.</p>

Clause	Requirement	Compliance	Findings
	(e) sewage odour (f) drainage services (g) customer billing.		
12.2.4	The Dispute Resolution Scheme must comply with the minimum standards, so far as applicable, specified in the Benchmarks for Industry-based Consumer Dispute Resolution Schemes released by the Commonwealth Minister for Customs and Consumer Affairs in August 1997.	Full compliance	An interview was conducted with the Deputy Ombudsman which indicated that compliance with the minimum standards and benchmarks as described in Clause 12.2.4 had been achieved. EWON is audited annually by an external consultant and the report is provided to the Minister and to Council and Board of EWON for review.
12.2.5	The Dispute Resolution Scheme must have the following features:		
	(a) The decision-making process of the Dispute Resolution Body and administration of the scheme is to be independent from Hunter Water and Subsidiaries of Hunter Water.	Full compliance	The articles and constitution of EWON demonstrate that EWON is independent from Hunter Water and any subsidiaries.
	(b) Hunter Water agrees to abide by the decisions of the Dispute Resolution Body in relation to disputes referred to it for resolution.	Full compliance	In becoming a member of EWON, Hunter Water has agreed "to be bound by and observe the terms of the Constitution" (Clause 11.8.2 (a)) and under Clause 6.2 "All decisions by the Ombudsman under paragraph 6.1 shall be automatically binding upon members."
	(c) The Dispute Resolution Scheme must adopt informal proceedings which discourage a legalistic adversarial approach	Full compliance	There is no direct data kept to assess informality. The EWON website states that EWON strives to deal with complaints in a way that is fair, just and timely. The procedures outlined in the report about EWON are designed to discourage a legalistic adversarial approach, to be informal and to be fair.
	(d) Decisions of the Dispute Resolution Body should be fair and be seen to be fair, by observing the principles of procedural fairness, by making its decisions based upon the information before it, and by having specific criteria upon which its decisions are based.	Full compliance	EWON indicated that the areas described in Clause 12.2.5 have been considered as part of the external review and no issues were raised in respect of this Clause.

Clause	Requirement	Compliance	Findings
	(e) The Dispute Resolution Scheme is to operate efficiently by keeping track of disputes referred to it, ensuring complaints are dealt with by the appropriate process and by the Dispute Resolution Body regularly reviewing the operation of the Dispute Resolution Scheme; and is to be funded by Hunter Water.	Full compliance	EWON uses a tracking system which monitors process as well as outcome (customer satisfaction, how many finalised) and provides weekly and monthly and quarterly reports to Hunter Water about contacts. The Council of EWON, which includes a member from Hunter Water, reviews the operation of the Scheme at its meetings.
	(f) The Dispute Resolution Scheme is to be free of cost to Customers and Consumers.	Full compliance	The Scheme is free of charge to customers and consumers. Hunter Water pays an annual fee based on the number and levels of complaints received by EWON and enables EWON to function without a charge to customers.
12.2.6	Hunter Water must prepare a pamphlet that explains how the Dispute Resolution Scheme operates and how it can be accessed. The pamphlet should cover both the Internal complaint handling procedures developed under clause 12.1 and the External Dispute Resolution scheme.	Full compliance	The pamphlet has been prepared and includes the required information. The 2003/04 audit recommended that information regarding access to interpreter services should be provided in other languages as in the customer Contract. This recommendation has not been addressed.
12.2.7	Hunter Water must provide the pamphlet to Customers and Consumers through their bills, at least once each year.	Full compliance	The pamphlet titled "Resolving Customer Disputes" was sent to all customers in the billing cycle commencing November 2004. This information is also available at Customer Centres, on the website.
12.2.8	Hunter Water must provide IPART with written reports of the determinations made by the Dispute Resolution Body based on information available to Hunter Water and information reasonably obtained from the Dispute Resolution Body. Where considered appropriate by Hunter 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.	Full compliance	No determinations were made by EWON during 2004/05. Hunter Water has provided a report to IPART including details of enquiries received and investigations carried out by EWON. The report is based on information from EWON and from Hunter water's records. Customer's identities are not disclosed in the report.
12.2.9	Hunter Water and information reasonably obtained from the Dispute Resolution Body. The report must contain the following information: (a) how the scheme works; Hunter Water must report on information available	Full compliance	The report contains the information required by Clause 12.2.9.

Clause	Requirement	Compliance	Findings
	<p>(b) the number and types of complaints received by the Dispute Resolution Body, classified by Suburb into one or more of the following categories:</p> <p>(i) water quality including health and aesthetic parameters</p> <p>(ii) continuity of water supply</p> <p>(iii) water pressure</p> <p>(iv) sewage overflow</p> <p>(v) sewage odour</p> <p>(vi) drainage services</p> <p>(vii) customer billing</p> <p>(c) in relation to (b), a summary of:</p> <p>(i) the outcome of those complaints;</p> <p>(ii) the time taken to resolve complaints;</p> <p>(iii) the procedure for resolving complaints;</p> <p>(iv) any problems of a systemic nature arising from the complaints; and</p> <p>(d) any other relevant information required by IPART to be included in the report.</p>	Full compliance	The report contains the information required by Clause 12.2.9.
12.2.10	Hunter Water must also publicly display the report provided under clause 12.2.9 on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.	Full compliance	The report for 2004/05 is available on the Hunter Water website. It is also available on request at the Customer Centres.
12.3	Complaints to other bodies		
12.3.1	Hunter Water must report on complaints made against Hunter Water to a court or tribunal, such as the Consumer Trader and Residential Tribunal, (based on information available from these bodies and Hunter Water itself as a	Full compliance	<p>Hunter Water has included the required information in the summary report titled – Complaint Handling – Performance 2004-05 – Report to IPART- August 2005.</p> <p>The report lists 5 complaints that were referred to IPART and</p>

Clause	Requirement	Compliance	Findings
	<p>party to the complaint) containing the following details:</p> <ul style="list-style-type: none"> (a) the number and types of complaints received by such other bodies; (b) the outcome of complaints; (c) how the complaints were resolved; (d) any problems of a systemic nature arising from the complaints; and (e) any other relevant information required by IPART to be included in the annual report. 		<p>provides the location, the category, and describes the issue and the outcome of these complaints.</p>

11.4 Discussion

Clause 12.1 Dispute handling procedures

Hunter Water achieved **full or high compliance** with all aspects of section 12.1.

In general Hunter Water has focused on four areas to improve its performance in handling complaints:

- Establishing and developing the Case Investigation Team to manage operational complaints and improve consistency, timeliness and quality of responses to customers.
- Planning process improvements and streamlining of manual tasks to improve customer service performance to coincide the introduction of the new Customer Information System (CIS) in March 2006.
- Developing new customer service standards aligned to Hunter Water's corporate customer service objectives, and planning staff training consistent with these new standards to be conducted in 2006.
- Structural changes and process improvements relating to the Customer Centres including establishment of the credit management team to improve consistency and control of outstanding debt, and streamlining the meter management process.

Hunter Water has an effective complaints handling policy (Policy 12) which was last updated in February 2003. This policy includes details consistent with the requirements of AS 4269 – 1995.

Hunter Water works with two systems for logging service difficulties and customer complaints:

- The Asset and Operations Management System (AOMS) recording all service calls about water, sewerage and drainage systems; and
- The Complaints Management System (CMS) receiving all complaints and other calls from customers.

In some cases a contact may be recorded on both systems when a customer expresses dissatisfaction with Hunter Water's service as well as requiring an immediate fault repair. The internal complaints report refers to contacts made on both systems.

The complaints handling policy requires staff training through provision of specific training modules, on the job training and ongoing training as required. The previous audit noted that staff training was not well recorded and therefore assessed compliance in this area as high rather than full compliance. No changes have been made in this area and training in complaints handling has virtually been put on hold in anticipation of training in the new processes relating to the introduction of the CIS. As a result compliance in this area is still considered to be high although full compliance is expected in the next period.

The Case Investigations Team was established in August 2004 to improve and streamline the handling of customer complaints, specifically those relating to operational issues. A review of the systems and processes utilised by the Case Investigations Team showed effective complaints handling processes where in place. The team has good customer focus and a high level of awareness of complaints handling techniques. The team is continuing to improve processes and analyses complaints data to identify and address process issues.

Analysis of complaints

Calls from customers reporting faults in the Contact Centre are initially logged in the Asset Management System and only become complaints if this is requested by the customer, if it relates to a systemic problem or if the customer is not happy with the way in which the service call has been handled. The calls and complaints received through both systems have been reported and are summarised in **Table 11.2**.

Table 11.2: Complaints and service calls received

Category	Total complaints and service calls received in 2002/03	Total complaints and service calls received in 2003/04	Total complaints and service calls received in 2004/05
Water quality	2,562	1,497	1,340
Continuity of water supply	443	726	798
Water pressure	1,079	580	739
Sewage overflow	5,468	5,621	6,470
Sewage odour	533	528	425
Drainage services	30	34	28
Customer billing	2,037	1,724	1,355
Totals	12,152	10,710	11,155

Table 11.3: Calls received by each system

Category	AOMS service calls	CMS
Water quality	1,246	94
Continuity of water supply	685	113
Water pressure	654	85
Sewage overflow	6,285	185
Sewage odour	345	80
Drainage services		28
Customer billing		1,355
Totals	9,215	1,940

There were a total of 2,656 complaints recorded in the CMS in 2004/05. The discrepancy between this and the total in Table 11.3 is due to the fact that not all complaints fit into the above categories. Table 11.4 compares these complaints in all categories with those of the previous two years.

Table 11.4: All categories of complaints

Category	2002-03		2003-04		2004-05	
	Number of Calls	% of Total Calls	Number of Calls	% of Total Calls	Number of Calls	% of Total Calls
Asset Enquiry	129	4%	140	5%	155	6%
Billing Enquiry*	912	31%	914	30%	783	29%
Capital Works Contract	152	5%	73	2%	123	5%
Community Consultation	0	0%	1	0%	0	0%
Compensation/Insurance	148	5%	181	6%	166	6%
Customer Service	109	4%	67	2%	48	2%
Developer Services	28	1%	30	1%	19	1%
Metering	248	8%	307	10%	194	7%
Miscellaneous	121	4%	99	3%	60	2%
Non-Standard Services	10	0%	13	0%	5	0%
Operations Maintenance	317	11%	333	11%	397	15%
Payment Options	19	1%	67	2%	34	1%
Privacy	1	0%	4	0%	4	0%
Property Details	66	2%	145	5%	98	4%
Sewer Odour*	113	4%	103	3%	83	3%
Sewer Overflow*	59	2%	96	3%	167	6%
Stormwater & Drainage*	20	1%	28	1%	30	1%
Technical Enquiry	4	0%	2	0%	6	0%
Water Conservation	0	0%	24	1%	14	1%
Water Continuity*	81	3%	158	5%	113	4%
Water Pressure*	218	7%	110	4%	72	3%
Water Quality*	228	8%	137	5%	85	3%
TOTAL	2983	100%	3032	100%	2656	100%

Notes: * Operating Licence Categories

The calls included in the foregoing table are exclusive of "Service Calls"

The 2004/05 period showed a significant reduction in complaints compared with the two previous years. The Hunter Water report summarises the areas where reduction in complaints were recorded and these include:

- water quality
- water continuity
- water pressure

- billing
- metering.

Increases in complaints were recorded in the categories of:

- Capital Works Contract
- Operations Maintenance
- Sewer Overflow.

Hunter Water notes that in 2004/05 the largest ever capital works programme was completed and the increase in complaints in this area correlates to the increase in activity. Hunter Water plans to focus a range of improvement initiatives aimed at reducing complaints in the specific areas identified.

External dispute resolution scheme

Hunter Water maintains ongoing membership of the external dispute resolution scheme provided by the Energy and Water Ombudsman NSW (EWON).

Hunter Water achieved full compliance in section 12.2 of the licence and reports high levels of satisfaction with the service provided by EWON. The procedure outlined by EWON meets the criteria of the licence and Hunter Water has provided a report on the results from the scheme for the year ended 30 June 2005 to IPART.

EWON received a total of 139 contacts from Hunter Water customers in 2004/05. This represents a significant decrease compared with the previous year (where the number of contacts was 237), largely due to a lower number of enquiries received (i.e. 186 enquiries for 2003/04 compared to 73 enquiries for 2004/05). The decrease is thought to be due to changes made to the White Pages listing for EWON which was easily misinterpreted by customers in 2003/04.

The 139 contacts (0.06% of the 216,000 customers) comprised:

- 73 enquiries
- 59 contacts requiring investigation
- 7 contacts for which investigations were not yet finalised.

The graph below (**Figure 11.1**) compares the last 3 years of data on EWON contacts and clearly shows that there was an unusually high level of enquiries in 2003/04, but this has returned to level consistent with 2002/03 following changes to the EWON White Pages entry. The number of complaints received is fairly consistent across the three years.

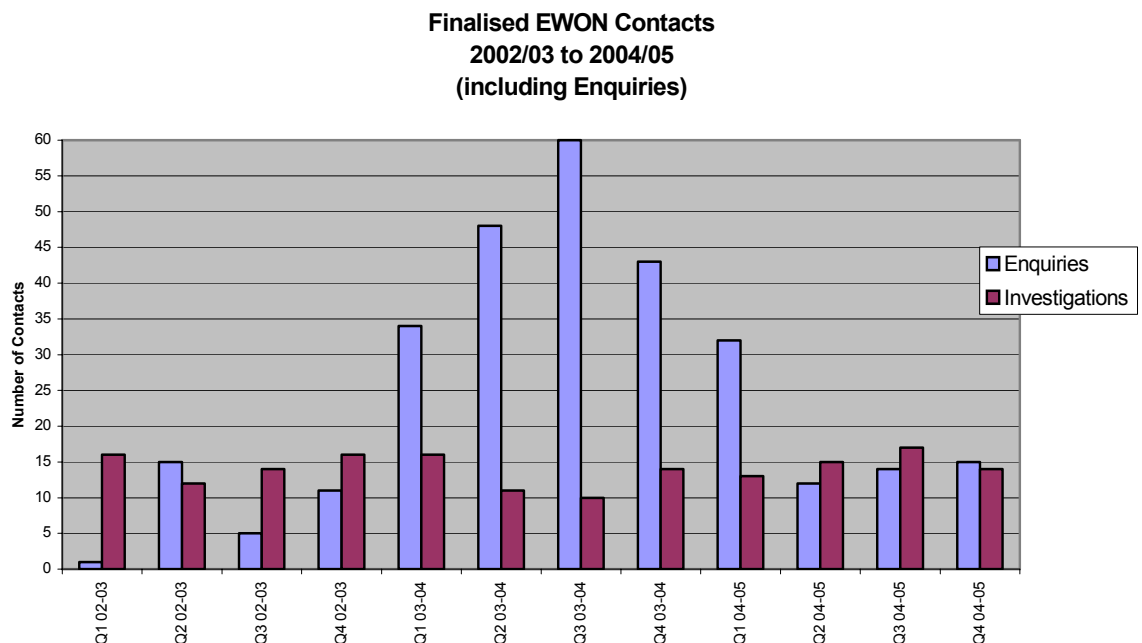


Figure 11.1: Finalised EWON contacts

EWON is the external dispute resolution scheme approved by the Minister and is audited annually by an external consultant who conducts a benchmarking process against the six benchmarks described in Clause 12.2.4 and an additional two benchmark items. The Deputy Ombudsman was interviewed in relation to this audit and advised that no areas of concern were raised with the performance of EWON against the benchmarks and other areas assessed. The reports are provided to the Minister, IPART, and to the Board and Council of EWON.

Complaints to other bodies

Hunter Water reports that there were five complaints made to IPART during 2004/05. Four of the five complaints related to sewer overflows affecting property during wet weather and were all from the same suburb. Each of the customers was advised that Hunter Water plans to commence upgrade works in late 2005 to address these issues.

The fifth complaint related to the method used to pro rata a change in usage charges, the customer was advised that the charging methodology is specified in the Customer Contract and IPART's pricing determination.

11.4.1 Submissions

IPART invites submissions from interested parties on any matter relating to the Operating Licence in preparation for the annual audit of the Licence. An advertisement was placed in the Sydney Morning Herald, the Australian and the Newcastle Herald on 25 August 2005, requesting submissions by 22 September 2005. No submissions were received by this date and none have been received to the date of this report.

11.5 Factors affecting compliance

11.5.1 Internal dispute resolution process

Conduct of suitable staff training in relation to Complaints handling and record keeping with respect to such training requires improvement in order to align with the requirements of AS4269 and Hunter Water's Policy 12 – Complaints Management. Hunter Water are planning an extensive training programme to coincide with the introduction of the CIS in early 2006 and will also make improvements to the Human Resources IT systems which will facilitate better management of training records.

11.6 Recommendations

11.6.1 Key recommendations

It is recommended that Hunter Water:

- R12.1** Records, in a manner suitable for reporting purposes, training of customer service staff for each audit year.

11.6.2 Secondary recommendations

It is recommended that Hunter Water:

- Modifies information about access to translation services provided in the "Resolving Customer Disputes" pamphlet to make it consistent with that provided in the Customer Contract Summary which is provided in a range of languages other than English.

Appendix A

Audit Brief from IPART



INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

I N V I T A T I O N T O T E N D E R

2004/05 OPERATIONAL AUDIT OF HUNTER WATER CORPORATION

1 BACKGROUND

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) is seeking suitably qualified consultants to conduct an audit of Hunter Water Corporation's (Hunter Water's) performance against its Operating Licence.

Hunter Water is 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.

In accordance with the *Hunter Water Act 1991*, the NSW Government granted an Operating Licence to Hunter Water. This licence was amended in 2002 and the amended licence came into force on 1 July 2002. A requirement of the Operating Licence is that an annual Operational audit be undertaken of the Corporation's performance of its obligations under the Licence. The Tribunal is required to conduct this annual Audit. A copy of the Operating Licence can be found at www.hunterwater.com.au.

Information gathered as part of the Audit is used to report on Hunter Water's performance and make recommendations to the Minister for Energy and Utilities (the Minister responsible for Hunter Water) on:

- a) the granting, amendment or cancellation of the Operating Licence;
- b) the imposition, amendment or cancellation of conditions in relation to the Operating Licence;
- c) action to be taken, and sanctions to be applied, in respect of a contravention of the Operating Licence; and
- d) remedial action that may be warranted as a result of a contravention of the Operating Licence.

The Department of Environment & Conservation, Department of Infrastructure, Planning and Natural Resources and Department of Health continue to regulate the Corporation's activities concerning the environment, use of the water resource and public health respectively.

2 OBJECTIVES OF CONSULTANCY

The objective of the consultancy is to assess Hunter Water's performance against its Operating Licence for the period from 1 July 2004 to 30 June 2005. In undertaking this task the auditor must:

1. conduct a detailed examination of those activities of Hunter Water that are regulated by the Operating Licence;
2. assess the level of compliance achieved by the Corporation 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;
3. assess and report on progress by the Corporation in addressing the comments made by the Minister (Attachment 1), providing supporting evidence for these assessments;
4. for each section of the Operating Licence, identify factors (if any) that have affected Hunter Water's performance for the period from 1 July 2004 to 30 June 2005 and make recommendations to the Tribunal on how Hunter Water can improve its performance in the future, based upon the audit assessment;
5. provide a formal briefing to the Tribunal or the Tribunal's Secretariat comprising an overview of the Corporation's overall performance against the requirements of the Operating Licence and the key findings of this assignment; and
6. prepare a full report on the findings of the assignment, including a summary of the Corporation'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 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 *Hunter Water Act 1991* and the Operating Licence on water quality, system performance, environmental and consumer issues.

As well as these requirements, the Tribunal has identified the following key issues for the 2004/2005 audit:

- Progress on water continuity against the Minister's requirements;
- Trends in system performance indicators for the period 2002/03 to 2004/05; and
- The need to amend the Integrated Water Resources Plan in the light of increased demand.

The Tribunal will advertise this audit process and seek submissions from the public. The audit process should take account of any public submissions received and the views of other stakeholders including environment, social welfare and public interest groups.

2.1 Outputs

The main outputs from the Audit are:

1. two draft reports and a final written report addressing the objectives of the consultancy;
2. discussions and meetings with the Tribunal and/or Secretariat; and

3. presentations to the Tribunal which outline the major issues and findings.

The draft reports should be provided in three bound copies and a loose leaf copy. The final written report should be provided in 6 bound copies and 1 loose-leaf copy, as well as in two electronic forms (MS Word and PDF format suitable for web publication).

The auditor should note that the final report will be publicly released. As such the report should be clearly and logically set out and written in plain English. On completion of the audit, the auditor's reports, working papers and advice provided to the Tribunal will become the property of the Tribunal.

2.2 Format of the Final Report

The Tribunal has a preferred format for the final report that includes:

- a summary of compliance with the requirements of the Operating Licence and Ministerial Requirements and a summary of key recommendations,
- a summary of key audit findings expressed in the context of the HWC organisation, its legislated objectives and its regulatory environment,
- for each section of the licence and for any Ministerial Requirements:
 - a summary of findings,
 - a summary of requirements,
 - details of compliance,
 - a discussion of any relevant factors affecting compliance, any opportunities for improvement, and other relevant issues.

Further details of the Tribunal's preferred format will be provided to the successful tenderer.

3 CONDITIONS OF TENDER

3.1 Timing

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

Contract Program		
Month	Date	Activity
July	Fri 29	Start of contract
September	Fri 2	Delivery of first draft Audit Report (First milestone)
	Wed 7	Discussion of first draft with Tribunal Secretariat (if required)
	Fri 30	Delivery of second draft Audit Report (Second milestone)
October	Wed 5	Discussion of second draft with Tribunal and/or Secretariat
November	Wed 16	Discussion of final Audit Report with Tribunal and/or Secretariat (if required)
	Fri 21	Delivery of final Audit Report (Third milestone)

The dates in the table for discussion of drafts and the final report are indicative and will be subject to negotiation between the Tribunal Secretariat and auditor. Weekly, written reports

should be provided to the Secretariat. Progress meetings in addition to those in the above table are expected. The detailed consultancy work plan should reflect these.

3.2 Fee

The fee quoted is to be inclusive of all costs including Goods and Services Tax, incidental expenses and disbursements. Payments will be due within 28 days of receiving an invoice as per an agreed payment schedule. The auditor may wish to outline a draft payment schedule.

A detailed breakdown of the consultancy costs is required with the proposal. The proposal should include estimates of the time required for the project, auditors to be involved in the project, their rates, and a total fee estimate. Staff costs should be clearly reconciled to the detailed work plan. Costs should allow for presentations to the Tribunal, discussion and meetings with staff of the Tribunal, and stakeholder meetings as required.

3.3 Proposal

The consultancy proposal should demonstrate an appreciation for the task as well as describe the intended approach for carrying it out. The personnel to be involved, including resumes detailing their experience should be listed. A detailed work plan is also required. Details of previous clients who can be contacted are also desirable.

3.4 Presentation

Shortlisted tenderers may be required to make a presentation on their proposal as part of the tender evaluation process.

3.5 Criteria for selection

In selecting the successful consultant the Tribunal will consider the following matters:

- in-depth understanding and expertise in the areas encompassed in the Operating Licence (ie. Water quality, system performance, consumer and environmental issues)
- extent of knowledge about water and sewerage businesses
- experience in similar projects
- understanding of Hunter Water's regulatory framework
- proposed consultancy fee
- adequate resourcing and ability to provide results within the stated time frame
- proposed audit and quality assurance procedures
- guaranteed availability of key staff
- demonstrated ability to enlist the agencies' cooperation whilst engendering a sense of acceptance of the relevant outcomes.

The successful tenderer will be able to put together an audit team with specific experience in each of the core auditable areas (water quality, system performance, consumer and environmental issues) and will include in its consultancy proposal details of the audit team structure having regard to these categories. Tenderers may form a consortium with other

firms or consultants to achieve the required set of skills in the areas of water science, engineering, environment and consumer issues.

3.6 Acceptance of Tender

The Tribunal reserves the right to:

- accept no tender at all
- postpone indefinitely the acceptance of a tender
- call for new tenders
- appoint one or more tenderers to undertake the review
- approve or reject any sub-contractors the tenderer may wish to appoint.

3.7 Disclosure of information on Government Contracts

Potential tenderers should note that Government contracting guidelines may require the routine disclosure of the following information:

- details of contract (description of project to be completed or goods / services to be provided or property to be transferred; commencement date of the contract; the period of the contract);
- the full identity of the successful tenderer including details of cross ownership of relevant companies;
- the price payable by the agency and the basis for future changes in this price;
- the significant evaluation criteria and the weighting used in tender assessment; and
- provisions for re-negotiation (where applicable).

3.8 Consultancy Contract

The successful tenderer will be obliged to enter into a contract with the Tribunal prior to commencing the Audit.

The Tribunal has a consultancy contract that covers issues including, but not limited to:

- consultancy information and documentation;
- ownership of intellectual property;
- conflicts of interest;
- confidentiality; and
- insurance.

The Tribunal reserves the right to modify contract terms for the final contract as it considers appropriate. A copy of the Tribunal's draft contract is available on request.

4 PARTIES TO THE AUDIT

The party managing and commissioning the Audit is the Independent Pricing and Regulatory Tribunal of New South Wales. The primary contact is:

Michael Sedwell tel: 61-2-9290-8487
 e-mail: Michael_sedwell@ipart.nsw.gov.au

5 LODGEMENT OF TENDER

Three bound copies and 1 loose-leaf copy of the tender should be lodged in a sealed envelope marked

2004/05 Hunter Water Operational Audit

addressed to: Ms Meryl McCracken
 General Manager, Support Services
 Independent Pricing and Regulatory Tribunal of NSW

at, PO Box Q290
 QVB POST OFFICE NSW 1230

or, Level 2
 44 Market Street
 SYDNEY NSW 2000

so that it is received by no later than 5.00 pm Sydney time, on Wednesday 29 June 2005.

ATTACHMENT 1 SUMMARY OF THE MINISTER'S COMMENTS ON THE 2003/2004 OPERATIONAL AUDIT

Issue	Comment
Water supply continuity	<p>The Minister endorsed the auditor's recommendation requiring Hunter Water to:</p> <p><i>"Continue to review its maintenance/operational practices to identify additional procedural and/or technological practices to enable it to better meet its water supply continuity Licence requirement."</i></p> <p><i>"Continue to utilise and trial its maintenance/operational practices identified during the reviews undertaken over the 2003/2004 year to reduce the extent and duration of planned water interruptions required to connect new developments to HWC's system."</i></p> <p><i>"Continue to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance."</i></p> <p>Review its systems/procedures/practices/contingency plans to allow HWC to respond more quickly to:</p> <ul style="list-style-type: none"> • Locate failures/bursts, particularly for its trunk mains • Minimise the number of customers affected by any failure by shutting down the trunk main and/or supplying customers from other sources; • Repair the failure; and • Return the trunk main to service, resupplying customers affected. <p><i>"Consider as part of any review of response procedures the installation of additional pressure/flow monitoring devices linked to HWC's existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed."</i></p>

Appendix B

Hunter Water's Operating Licence

OPERATING LICENCE



2002-2007



caring for our
community and the
environment

HUNTER WATER CORPORATION
PO BOX 5171 HRMC NSW 2310
432 KING STREET NEWCASTLE WEST
WWW.HUNTERWATER.COM.AU

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1. DEFINITIONS AND INTERPRETATION

1.1. Definitions

In this Licence:

Act means the Hunter Water Act 1991.

Annual audit is defined in clause 11.1.1 as the annual operational audit of Hunter Water.

Area of operations means the area expressed in Section 16 of the Act and specified in Schedule 1.

[Note: Hunter Water has the area of operations that Hunter Water Corporation Limited had immediately before it ceased to be a company State Owned Corporation, together with any areas specified by that date by Gazette in accordance with Section 16(1)(c) of the Act. Section 16 requires that the area of operations be specified in the operating Licence.]

ARMCANZ means the Agriculture and Resource Management Council of Australia and New Zealand.

[Note: ARMCANZ has been replaced by the Natural Resources Ministerial Council following changes approved by COAG in June 2001. However, the 1996 Guidelines still remain in force.]

Bulk water means water that is in a Water storage.

Commencement date means the date at law on which this Licence commences.

Competition Principles Agreement means the agreement so described made on 11 April 1995 between the Commonwealth, States and internal territories, as in force from time to time.

Consultative Forum means the consultative body referred to in clause 5.4.

Consumer means any person who uses the Services, whether or not they are a Customer.

Customer means any person who is taken to have entered into a Customer Contract under Section 36 of the Act, or to have entered into a contract on terms relating to the imposition of charges under Section 39 of the Act.

Customer Contract means the contract annexed as Schedule 2, as varied from time to time in accordance with Section 38 of the Act.

Drainage service means the Drainage service provided by Hunter Water under the Licence which includes the collection, transportation, treatment and disposal of runoff surface water via the Drainage system.

Drainage system means the drainage mains, pipes or channels, and other equipment provided, managed, operated and maintained by Hunter Water to provide Drainage services.

Dispute Resolution Body means a reputable person possessing qualifications and experience in the resolution of disputes by way of mediation or otherwise and includes a person who carries out investigative functions in the nature of an ombudsman.

Drinking water means Bulk water that, (following Water treatment to the standard for use as drinking water specified in the Drinking water guidelines defined in clause 6.1), is supplied via the Water supply system primarily for human consumption but which has other personal, domestic or household uses such as bathing and showering.

Ecologically Sustainable Development or ESD has the same meaning as in the Protection of the Environment Administration Act 1991.

Environmental Management Plan means a plan concerning the environment which contains, at a minimum, the details set out in clause 9.1.

EPA means the Environment Protection Authority constituted by the Protection of the Environment Act 1991.

Hunter Water means the Hunter Water Corporation constituted as a corporation by the Act.

Hunter Water Board means the body established under the Hunter Water Board Act 1988.

IPART means the Independent Pricing and Regulatory Tribunal of NSW constituted under IPART Act.

IPART Act means the Independent Pricing and Regulatory Tribunal Act 1992.

Licence means this operating Licence granted under Section 12 of the Act to Hunter Water.

Local Environment Groups may include the Central Coast Centre for Sustainability, Green Alliance Network, United Residents Group for the Environment of Lake Macquarie Inc, Wilderness Society Newcastle and groups representing landcare interests in the Williams River valley and such organisations as Hunter Water or IPART may nominate.

Memorandum of understanding means a memorandum of understanding to which clauses 3.3.1 to 3.3.4 apply.

Minister means the Minister responsible for administering those provisions of the Act relating to this Licence.

National Parks and Wildlife means the National Parks and Wildlife Service constituted by the National Parks and Wildlife Act 1974.

NSW Fisheries means the NSW Department of Fisheries.

NSW Health means the NSW Department of Health.

NHMRC means the National Health and Medical Research Council.

Other Grades of water means water supplied by Hunter Water that is not Drinking water.

Property means;

- (a) an individual dwelling or premises used for any purpose;
- (b) land, whether built on or not (excluding Public land); or
- (c) a lot in a strata plan that is registered under the Strata

Schemes (freehold Development) Act 1973 or the Strata Schemes (Leaseholder Development) Act 1986, that is connected to, or for which a connection is available to, Hunter Water's Water supply system or Sewerage system or within a declared drainage area.

Public consultation has the meaning given by clause 1.2.1.

Public land means land vested in or under the control of a Minister of the Crown or a public authority.

Rental Bond Board means the Rental Bond Board constituted by the Landlord and Tenant (Rental Bonds) Act 1977.

Recycled water means discarded water of any origin whether clean or contaminated, which, after Water Treatment, if any, is suitable for other uses, except as Drinking water.

Reporting date means 1 September in each year of this Licence.

Reporting period means the 12 months of the financial year ending on 30 June immediately preceding a Reporting date.

Review means the review of this Licence under clause 2.3.1.

[Note: the review is to commence on or about 1 January 2006.]

SEDA means the Sustainable Energy Development Authority constituted by the Sustainable Energy Development Act 1995.

Services means collectively:

- (a) the Water service;
- (b) the Sewerage service; and
- (c) the Drainage service.

Sewage overflow means a discharge of untreated or partially treated sewage from the Sewerage system, occurring in wet weather or dry weather.

Sewerage service means the Sewerage service provided by Hunter Water under the Licence which includes the collection, transportation, treatment and disposal of sewage via the Sewerage system.

Sewerage system means the sewer mains, pipes, treatment plants and other equipment provided, constructed, managed, operated and maintained by Hunter Water to provide Sewerage services.

SOC Act means the State Owned Corporations Act 1989.

State Environment Groups may include the Nature Conservation Council of NSW, the Total Environment Centre and other such other organisations as Hunter Water or IPART may nominate.

Subsidiary has the same meaning as 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".]

Suburb means the suburb assigned a geographical name under the Geographical Names Act 1966.

Systems means collectively:

- (a) the Water supply system;
- (b) the Sewerage system; and
- (c) the Drainage system.

Waste water means any discarded water of any origin, clean or contaminated, that is discharged into the Sewerage system or the Drainage system.

Water management licence means a water management licence or such other licence of the same or similar type, granted under the Water Act 1912 or the Water Management Act 2000.

Water storages means Hunter Water's dam walls, pumps and other works used for the extraction and storage of:

- (a) water in rivers and lakes;
- (b) water occurring naturally on the surface of the ground; and
- (c) sub-surface waters.

Water service means the Water service provided by Hunter Water under the Licence which includes the storage, treatment, transfer and delivery of water via the Water supply system.

Water supply system means the storages, water mains, pipes, treatment plants and other equipment provided, constructed, managed, operated and maintained by Hunter Water to provide Water services.

Water treatment means a process for treating water that may include disinfection, filtration or chemical or biological processes or a combination of such.

1.2. Interpretation

Public Consultation

1.2.1 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, which may include Local Environment Groups and State Environment Groups;
 - (iii) displayed on Hunter Water's website and at Hunter Water's Customer centres;
 - (iv) given to the Consultative Forum; and
 - (v) given to IPART.
- (b) submissions be sought from the public and that these submissions be considered by the person conducting the review.

Reporting

1.2.2 In this Licence, unless otherwise provided, where there is a requirement on Hunter Water to report on or to provide information in relation to a matter, Hunter Water must, in addition to anything else it is required to do:

- (a) report on or provide information in relation to that matter on each Reporting Date and for each corresponding Reporting period; and
- (b) report on or provide information in relation to that matter to IPART or to the person which IPART directs, including without limitation, to the person undertaking the annual audit of this Licence under clause 11.1.2.

1.2.3 Clause 1.2.2 does not extend to clauses 5.4.8, 6.4.4 and 7.7.1 which apply as they so provide.

Use of Information by IPART

1.2.4 Information provided to IPART under this Licence may be used by IPART for the purpose of an investigation or report under IPART Act in relation to Hunter Water, or in the discharge of any function lawfully conferred on IPART.

General provisions

1.2.5 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) a reference to a law (including the Act) includes regulations made under the law;
- (c) a reference to regulations includes ordinances, codes, Licences, orders, permits and directions;
- (d) a reference to a law, regulations, guidelines, any Memorandum of understanding, plan or other strategy, standards, or list of indicators includes consolidations, amendments, variations, re-enactments, or replacements of any of them;
- (e) 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;
- (f) a reference to a year means a calendar year that ends on 31 December;
- (g) a reference to a financial year means a period of 12 months that ends on 30 June;
- (h) a reference to a clause or Schedule is to a clause of or Schedule to this Licence;
- (i) where an expression is defined, different grammatical forms of that expression have a corresponding meaning;
- (j) the singular includes the plural and vice versa.

1.2.6 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.

1.2.7 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.

1.2.8 If there is disagreement between Hunter 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 him or a person appointed by him.

1.2.9 The italicised explanatory notes in this Licence do not form part of this Licence.

1.2.10 Where IPART is required to do some act or thing under this Licence, Hunter Water must provide reasonable assistance to IPART, or other person nominated by IPART, with the intent of enabling that act or thing to be done.

1.2.11 If there is any inconsistency between this Licence and a Memorandum of understanding or between this Licence and a Customer Contract (including any interpretation of any provision), this Licence will prevail to the extent of the inconsistency, in each case.

1.2.12 Any clause of this Licence that expressly or impliedly requires Hunter Water to vary the Customer Contract is subject to Section 38 of the Act and is of no force or effect unless the variation is approved by the Governor under Section 38 of the Act.

2. INFORMATION ABOUT THIS LICENCE

2.1. Objectives of this Licence

2.1.1 The objective of this Licence is to enable and require Hunter Water to lawfully provide the Services within its Area of Operations. Consistent with this objective, this Licence requires Hunter 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 by the Act and the Licence; and
- (d) be subject to Annual audits of compliance with this Licence.

2.2. Duration of Licence

- 2.2.1 This Licence is for a term of 5 years commencing on the Commencement date.

[Note: the Commencement date is defined in clause 1.1.]

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

[Note: Section 15 of the Act allows the Governor to renew the Licence for a maximum of 5 years at a time.]

2.3. Review of Licence

- 2.3.1 On or about 1 January 2006, a review of this Licence must be commenced:

- (a) to determine whether this Licence is fulfilling its objectives;
- (b) in relation to any matter required to be reviewed by this Licence; and
- (c) to determine the terms of any renewal of this Licence.

- 2.3.2 This review is to be undertaken by IPART, unless the Minister otherwise determines.

- 2.3.4 The person undertaking the review must engage in Public consultation as part of the review.

- 2.3.5 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.

2.4. Licence amendment

- 2.4.1 Subject to the Act, this Licence may be amended by the Governor by notice in the Government Gazette.

[Note: Section 14 of the Act requires that the Licence may only be amended in the manner specified in the Licence.]

2.5. Contravention of Licence

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

[Note: Section 17 of the Act provides that, where the Minister is of the opinion that Hunter Water contravenes this Licence, the Minister may serve a letter of reprimand on Hunter Water; or the Governor may direct that Hunter Water is to pay a monetary penalty not exceeding \$150,000 or the Governor may direct that the operating Licence is to be cancelled in accordance with Section 18.]

- 2.5.2 Hunter Water acknowledges that if it knowingly contravenes the operating Licence, IPART may take action against Hunter Water under the Act.

[Note: Section 17A of the Act provides that where Hunter Water knowingly contravenes this Licence, the Tribunal may require Hunter Water to undertake remedial action or may impose a monetary penalty not exceeding \$10,000 for the first day on which the contravention occurs and a further \$1000 for each subsequent day (not exceeding 30 days) on which the contravention continues.]

2.6. Cancellation of Licence

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

[Note: Section 18 sets out the circumstances in which this Licence may be cancelled by the Governor. These include where Hunter Water ceases, otherwise than as authorised by the operating Licence, to do any of the things referred to in Section 13 of the Act; or where Hunter Water is, in the Minister's opinion, in material default in compliance with the Licence viewed in terms of the operation of the operating Licence as a whole; or where Hunter Water is insolvent within the meaning of Section 460 of the Corporations Law

or has been convicted of a criminal offence punishable by a fine of at least \$10,000 or, if Hunter Water were a natural person, imprisonment for 12 months or more.]

3. HUNTER WATER'S RESPONSIBILITIES

3.1. Responsibilities of Hunter Water under this Licence and other laws

3.1.1 Hunter Water must comply with this Licence and all applicable laws.

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

- ▶ Hunter Water Act 1991;
- ▶ State Owned Corporations Act 1989;
- ▶ Protection of the Environment Operations Act 1997;
- ▶ Public Health Act 1991;
- ▶ Water Legislation Amendment (Drinking Water and Corporate Structure) Act 1998;
- ▶ Water Act 1912;
- ▶ Water Management Act 2000;
- ▶ Environmental Planning and Assessment Act 1979;
- ▶ Independent Pricing and Regulatory Tribunal Act 1992; and
- ▶ Dams Safety Act 1978.]

3.2. Responsibility of Hunter Water under the Hunter Water Act

3.2.1 Hunter Water acknowledges that its principal objectives under Section 13 of the Act are:

- (a) to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable Systems and Services for supplying water, providing Sewerage services and disposing of Waste water;
- (b) to provide, operate, manage and maintain a Drainage service within the capacity of the Drainage service

included in the business undertaking transferred under Part 3 by the Hunter Water Board to Hunter Water as at the date of the transfer of the business undertaking;

(c) to ensure that the Systems and Services meet the quality and performance standards specified in the Licence in relation to water quality, service interruptions, price levels and other matters determined by the Governor and set out in the Licence; and

(d) to maintain in accordance with the Licence, procedures under which Hunter Water is to consult with its Customers at regular intervals in relation to the provision of the Systems and Services referred to in paragraphs (a) to (c).

3.3. Memorandum of understanding

3.3.1 Hunter Water must use its best endeavours to maintain a Memorandum of understanding with NSW Health for the term of this Licence.

3.3.2 The purpose of a Memorandum of understanding is to form the basis for co-operative relationships between the parties to the memorandum. In particular, the memorandum 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.

3.3.3 It is acknowledged that as at the Commencement date Hunter Water has entered into Memoranda of understanding with both the EPA and the Department of Land and Water Conservation in order to set out the framework for co-operative relationships between the parties to the memoranda.

3.3.4 Clause 3.3.1 does not limit the persons with whom Hunter Water may have a Memorandum of understanding.

4. LICENCE AUTHORISATION AND AREA OF OPERATIONS

4.1. What the Licence authorises and regulates

4.1.1 This Licence is granted to enable and require Hunter Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable Systems for providing the Services throughout the Area of Operations.

4.1.2 Hunter Water must ensure that the Systems comply with the quality and performance standards required in this Licence or required to be developed under this Licence.

4.2. Powers not limited

4.2.1 This Licence does not restrict or affect Hunter Water's power to carry out any functions imposed under any applicable law.

4.3. Area of Operations

4.3.1 The Area of Operations may be varied only as permitted under the Act.

[Note: The Area of Operations for Hunter Water is listed in Schedule 1 of this Licence. Section 16 of the Act states that subject to certain requirements the Governor may specify the Area of Operations by order published in the NSW Government Gazette.]

4.4. Connection of Services

4.4.1 Subject to clause 4.4.2 and Hunter Water continuing to be in compliance with any applicable law, Hunter Water must ensure that its Services are available for connection on request within its Area of Operations.

4.4.2 Connection to the Services is subject to any conditions Hunter Water may 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 to be taken as forming an essential requirement for gaining Hunter Water's approval for connection of a Property to a water main or sewer main under this Licence.

[Note: Services are provided under the Customer Contract at Schedule 2 of this Licence, or other contracts as provided for by Section 37 of the Act.]

4.5. Non-exclusive Licence

4.5.1 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.

5. CUSTOMER AND CONSUMER RIGHTS

5.1. Customer Contract

5.1.1 The Customer Contract sets out the rights and obligations of Customers and Hunter 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 applicable law.

5.1.2 The Customer Contract automatically applies to the persons to whom under the Act or any applicable law, it is expressed to apply.

5.1.3 A copy of the Customer Contract, and any variations to it must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, and made available at its premises for access or collection by any member of the public, also free of any charges imposed by Hunter Water.

5.1.4 The Customer Contract may only be varied in accordance with the Act.

[Note: The Customer Contract is set out in Schedule 2 of this Licence. Division 5 of Part 5 of the Act contains various provisions in relation to the Customer Contract.

Section 38 provides that Hunter Water may vary the Customer Contract with the approval of the Governor. Section 38 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.]

5.1.5 Unless otherwise required by the Minister, IPART must initiate a review of the Customer Contract. The review must be completed within 12 months of the Commencement date.

5.1.6 The review must have regard to the system performance standards in Part 7 of this Licence.

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

5.1.8 Within 3 months of the completion of the review of the Customer Contract under clause 5.1.5, Hunter Water must, if directed by the Minister, take all steps necessary to issue a new Customer Contract that addresses the recommendations of the review report.

5.1.9 Within 3 months of the completion of the review of the Customer Contract under clause 5.1.5, Hunter 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; and
- (c) lists Hunter Water's local offices and emergency contact numbers in its Area of Operations.

5.1.10 The pamphlet prepared under clause 5.1.9 must be updated when changes are made to the Customer Contract and must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water and also disseminated by Hunter Water free of charge:

- (a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;
- (b) to Customers or Consumers, at least once every two years with their bills; and
- (c) to any other person on request.

5.1.11 Subject to the Act, Hunter 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 Hunter Water and any such person.

5.2. Consumers

5.2.1 Hunter 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.

5.2.2 Where Consumers are liable to Hunter Water for charges for water use, Hunter Water must fulfil its obligations under the Customer Contract relating to debt and disconnection procedures as if those obligations also extended to Consumers.

5.3. Code of practice and procedure on debt and disconnection

5.3.1 Within 6 months of the Commencement date, Hunter Water must develop a code of practice and procedure on debt and disconnection (collectively "Code").

5.3.2 The Code must:

- (a) provide for deferred payment or payment by installment options for charges; and
- (b) provide that the payment options referred to in (a) are to be advised in bills.

5.3.3 Hunter Water must ensure that the rights and obligations in the Code are incorporated into the Customer Contract as if it were part of the Customer Contract.

5.3.4 Hunter Water must disseminate free of charge information on its Code;

- (a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;
- (b) to Customers or Consumers, at least once each year with their bills; and
- (c) to any other person on request.

5.4. Consultative Forum

5.4.1 Hunter Water must establish and regularly consult with a Consultative Forum to enable community involvement in issues relevant to the performance of Hunter Water's obligations under this Licence.

5.4.2 The Consultative Forum may be utilised by Hunter Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Hunter Water, on the Customer Contract and on such other key issues related to Hunter Water's planning and operations as Hunter Water may determine, consistent with the Consultative Forum Charter developed under clause 5.4.7.

5.4.3 A Consultative Forum under this Licence must be established within 6 months of the Commencement date.

- 5.4.4 If prior to the Commencement date Hunter Water appointed persons to a forum similar to a Consultative Forum, that forum and its membership will continue subject to this clause and will be regarded as a Consultative Forum for the purposes of this Licence. The term of the members of that forum will expire no later than six months after the Commencement date. After that the membership of the Consultative Forum must be determined in accordance with the Consultative Forum Charter established under clause 5.4.7. Members appointed to that forum prior to the Commencement date are eligible to be re-appointed to a Consultative Forum unless the Consultative Forum Charter otherwise provides.
- 5.4.5 Hunter Water must at all times appoint the members of the Consultative Forum.
- 5.4.6 Subject to clause 5.4.4, at all times, the membership of the Consultative Forum must between them include a representative from at least each of the following:
- (a) business and Consumer groups;
 - (b) organisations representing low income households;
 - (c) people living in rural and urban fringe areas;
 - (d) residential Consumers;
 - (e) environmental groups;
 - (f) local government; and
 - (g) people from non-English speaking backgrounds.
- 5.4.7 Within 3 months of the Commencement date, Hunter Water must develop in consultation with the Consultative Forum, a Consultative Forum Charter for the duration of this Licence that addresses the following issues:
- (a) the role of the Consultative Forum;
 - (b) selection criteria on how members will be drawn from the community, and information on how vacancies for membership will be advertised,
 - (c) the procedure for appointment of members,
 - (d) the term of members,
 - (e) information on how the Consultative Forum will operate;
 - (f) a description of the type of matters that will be referred to the Consultative Forum;
 - (g) procedures for the conduct of Consultative Forum meetings, including the appointment of a chairperson;
 - (h) communicating the outcome of the Consultative Forum's work to Hunter Water;
 - (i) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and
 - (j) funding and resourcing of the Consultative Forum by Hunter Water.
- 5.4.8 Hunter Water must provide the Consultative Forum with information within its possession or under its control necessary to enable the Consultative Forum to discharge the tasks assigned to it, other than information or documents over which Hunter Water or another person claims confidentiality or privilege.
- 5.4.9 A copy of the Consultative Forum Charter must be posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, and made available at its offices for access or collection by any member of the public, also free of charges imposed by Hunter Water.
- 5.4.10 Hunter Water must report on the establishment and operations of the Consultative Forum and the development of the Consultative Forum Charter.
- 5.4.11 As part of the Licence review referred to in clause 2.3.1, IPART must evaluate and report on the effectiveness of the Consultative Forum and compliance with the Consultative Forum Charter.

6. WATER QUALITY

6.1. Definitions

In this Part:

Aesthetic guideline values means the concentration or measure of a physical or chemical characteristic of water that is associated with good water quality. Some examples include turbidity, pH and colour.

Drinking water guidelines means collectively:

- (a) the 1996 NHMRC and ARMCANZ Australian Drinking water guidelines; and
- (b) the guidelines in (a) as amended, updated or supplemented from time to time as specified by NSW Health.

Health guideline values means the concentration or measure of a physical, chemical, biological or radionuclide characteristic of water that, based on present knowledge, does not result in any significant risk to the health of a person over a lifetime of consumption.

Multi-barrier approach means an approach in which the overall risk of an incident occurring is significantly reduced by implementing and optimising several barriers from Water storages through to the ultimate Consumer.

Physical characteristics of Drinking water means those physical characteristics of Drinking water specified in the Drinking water guidelines including dissolved oxygen, hardness, pH, taste and odour, total dissolved solids, true colour and turbidity.

6.2. Drinking Water Quality - Standards

6.2.1 Hunter Water must comply with the following relating to Drinking water:

- (a) the Drinking water guidelines relating to Health guideline values specified by NSW Health; and
- (b) the Drinking water guidelines relating to Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc.

6.2.2 If there is an inconsistency between the Health guideline values in clause 6.2.1(a) and the Aesthetic guideline value in clause 6.2.1(b), the Health guideline value is to prevail.

[Note: A significant aim of the Drinking water quality standards is to ensure that Hunter Water achieves appropriate public health outcomes. The Drinking water guidelines include catchment and system management practices to minimise the risk of contamination to water supplies, for example, the catchment management practices required to minimise the risk of contamination by *Cryptosporidium* and *Giardia*.]

6.2.3 In delivering the Water services, Hunter Water must have regard to the concepts of risk minimisation practices and system management of public water supplies in the Drinking water guidelines (including in relation to *Cryptosporidium* and *Giardia*).

[Note: In releasing draft guidelines on *Cryptosporidium* and *Giardia*, NHMRC has stated that it is not possible to set guideline levels for *Cryptosporidium* and *Giardia* in Drinking water because there is a lack of a suitable method to identify organisms in Drinking water that cause human infection.]

6.2.4 In assessing Hunter Water's compliance with clause 6.2, pH levels in cement mortar lined pipes will be assessed in the range 6.5 – 9.2, in accordance with the Drinking water guidelines.

[Note: Fact Sheet 25 of the Drinking water guidelines sets out the pH levels applicable to cement mortar lined pipes.]

6.3. Drinking Water Quality - Monitoring

6.3.1 Hunter Water must prepare, to the satisfaction of NSW Health, an Annual Comprehensive Water Quality Monitoring Plan for the Water supply system by 30 April each year, for the duration of this Licence.

6.3.2 The Annual Comprehensive Water Quality Monitoring Plan for the Water supply system must provide for performance monitoring and regular sampling, laboratory testing and processes to ensure quality control, as required by NSW Health. The monitoring of water quality must include:

- (a) the health parameters and the aesthetic parameters for which compliance is required under clauses 6.2.1 (a) and (b); and
- (b) the parameters relating to Bulk water as are specified in Schedule 3.

[Note: The characteristics of water that are listed in Schedule 3 are those that may not, without additional treatment, be substantially removed or reduced through Water treatment processes used by Hunter Water.]

6.3.3 The monitoring must assess the quality of Drinking water supplied by Hunter Water to Customers and Consumers. 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 Customers and Consumers, to the satisfaction of NSW Health.

6.3.4 Hunter Water must undertake Drinking water quality monitoring during this Licence as required by NSW Health.

6.3.5 Where the Drinking water guidelines recommend monitoring at a Customer's or Consumer's tap, Hunter Water must monitor at the Property boundary from a Water service pipeline directly off a watermain which is representative of the quality of water supplied to the Customer or Consumer.

[Note: The requirement for an Annual Comprehensive Water Quality Monitoring Plan is also found in the Memorandum of understanding between NSW Health and Hunter Water, July 1999.]

6.4. Drinking Water Quality - Reporting

6.4.1 A monthly summary of Hunter Water's water quality monitoring test results must be placed on its website on the internet each month and also made available at its offices for access or collection by any person, free of any charges imposed by Hunter Water.

6.4.2 Hunter Water must produce an Annual Water Quality Report that compares actual Drinking water quality against the requirements of the Drinking water guidelines. The Annual Water Quality Report must provide detail on the Health guideline values and Aesthetic guideline values for which compliance is required under clause 6.2.1.

6.4.3 The Annual Water Quality Report must also include a summary of monitoring information, including information relating to Bulk water parameters as specified in clause 6.3.2 and Schedule 3. The Annual Water Quality Report must indicate water quality trends and problems, and a summary of system failures (significant and major water quality incidents) over the previous financial year and action taken to resolve them and how public health was protected.

6.4.4 The Annual Water Quality Report must be prepared by 30 November each year, unless otherwise agreed, and must relate to the immediately preceding financial year. The report must be provided to IPART, and must also be placed on Hunter Water's website on the internet for downloading by the public free of any charge imposed by Hunter Water and also made available at its offices for access or collection by any person, also free of charge.

6.5. Drinking Water Quality - Planning

6.5.1 Hunter Water must maintain, to the satisfaction of NSW Health, a Five-Year Water Quality Management Plan.

[Note: The requirement for the development of a Five-Year Water Quality Management Plan is also found in the Memorandum of understanding between NSW Health and Hunter Water, July 1999. The MOU requires that Hunter Water develop a strategy for the comprehensive management of water quality issues outlining its current and long-term management and public health aspects of wastewater disposal and reuse]

6.5.2 The Five-Year Water Quality Management Plan must include strategies for the comprehensive management of all aspects of the water supply cycle necessary to ensure that the quality of Drinking water supplied to Customers and Consumers complies with clause 6.2.1. The Plan should adopt the Multi-barrier approach to protection of Drinking water outlined in the Drinking water guidelines covering catchment management and Bulk water, treatment, disinfection and Water supply system management.

6.5.3 Hunter Water must prepare, to the satisfaction of NSW Health, an Annual Water Quality Improvement Plan for the Water supply system by 31 March in each year, unless otherwise specified following the review under clause 6.5.5.

6.5.4 The Annual Water Quality Improvement Plan must incorporate system and operational changes needed to address problems identified through Drinking water quality monitoring data and through periodic system inspections and evaluations, the aim of which is to reduce risks to public health and meet any Aesthetic guideline values applying to Hunter Water in or by this Licence.

6.5.5 The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Licence to assess its continued effectiveness and whether there is a continued need for the plan each year.

[Note: The requirement for an Annual Drinking Water Quality Improvement Plan is also found in the Memorandum of understanding between NSW Health and Hunter Water, July 1999.]

6.5.6 Hunter Water must assess the risks of failing to comply with clause 6.2, in relation to Drinking water. Hunter Water must conduct this risk assessment within six months of the Commencement date, and must review its risk assessment at least twice during this Licence.

6.5.7 Hunter Water must maintain, to the satisfaction of NSW Health, an Incident Management Plan, which must remain in place until any new plan is developed in agreement with NSW Health.

6.5.8 The Incident Management 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 of public health advice received from NSW Health to Customers.

[Note: The requirement for a Comprehensive Incident Management Plan is also found in the Memorandum of understanding between NSW Health and Hunter Water, July 1999.]

6.6. Other Grades of water

6.6.1 Other Grades of water supplied by Hunter 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, and other relevant government agencies.

6.6.2 Where there is a conflict between any of the guidelines, requirements or standards applying to Hunter Water under clause 6.6.1 the Minister's decision will prevail.

6.6.3 Hunter Water must use its best endeavours to reach agreement with persons to whom Other Grades of water is supplied, as to the water quality standards that are to apply to that water for use other than as Drinking water.

The terms of the arrangements must at minimum include:

- (a) the standard of the quality of the water supplied;
- (b) the purpose of the supply;
- (c) the continuity of the water supplied; and
- (d) the costs to be paid by Customers for the supply of water to them.

6.6.4 Hunter Water must advise persons to whom Other Grades of water is supplied, of the potential uses for the Other Grades of water and of the requirement of the water to undergo Water treatment, if it is to be used as Drinking water.

6.7. Environmental Water Quality

6.7.1 Hunter Water must report its performance against any 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.

7. SYSTEM PERFORMANCE

7.1. Definitions

In this Part:

Low pressure area is a Suburb or part thereof described in clause 7.7.1 (a).

Planned water interruption means a Water interruption for which notice has been given by Hunter Water to the occupier of the Property.

Power failure means a failure of the electricity power supply system of the supplier servicing Hunter Water where that power supply system is used by Hunter Water as the primary source of power for its systems.

Pressure incident has the same meaning as in clause 7.3.2 of this Licence.

Third party damage means damage to goods or fixtures that is caused by a person other than Hunter Water or an agent of Hunter Water acting within the scope of its authority.

Unplanned water interruption means a Water interruption for which no notice has been given by Hunter Water to the occupier of the Property and includes a Water interruption that results from Third party damage or a Power failure.

Uncontrolled sewage overflow means a Sewage overflow on Property or Public land where the overflow is not intended by Hunter Water.

Water interruption means a disruption in the supply of water from the Water supply system up to the point at which a Property connects to Hunter Water's main that services that Property.

7.2. Interpretation

Commencement and cessation of a Water interruption

7.2.1 A Water interruption will be taken to have commenced:

- (a) In the case of an Unplanned Water interruption, on the earlier of:
 - (i) the time that Hunter Water is aware that a Water interruption has occurred or the time that, having regard to all the circumstances, Hunter Water ought reasonably to have become aware of a Water interruption;
 - (ii) the time that a Water interruption is estimated by Hunter Water to have occurred by the application of well accepted methodologies or practices designed to estimate such occurrences; and
 - (iii) the time that Hunter Water is informed of a Water interruption by a person.
- (b) In the case of a Planned water interruption, at the time that the water is interrupted for work that is specified in the notice given by Hunter Water.
- (c) A Water interruption will be taken to have ended at the time that Hunter Water reasonably estimates that the Water interruption ceases.

Commencement and cessation of a Pressure incident

7.2.2 Clause 7.2.1 (a) and (c) applies (with all necessary changes) to a Pressure incident as if the reference in that clause to a Water interruption were a reference to a Pressure incident.

Commencement and cessation of Sewage overflows

7.2.3 Clause 7.2.1 (a) and (c) applies (with all necessary changes) to an Uncontrolled sewage overflow as if the reference in that clause to a Water interruption were a reference to an Uncontrolled sewage overflow.

7.3. System Performance Standards

Water Continuity Standard

7.3.1 Hunter Water must ensure that no more than 14,000 Properties in a financial year experience one or more Water interruptions (whether a Planned water interruption or an Unplanned water interruption) which taken together have a cumulative duration exceeding 5 hours.

Water Pressure Standard

7.3.2 Hunter Water must ensure that no more than 4,800 Properties in a financial year experience one or more pressure incidents, where a "Pressure incident" is an event where the water pressure to a Property falls below 20 metres head at the point of connection of the Property to Hunter Water's main, other than as a result solely of:

- (a) a Water interruption;
- (b) water usage by authorised fire authorities in the case of a fire; or
- (c) operational problems (including breaks in a main or a failure of a pump) that are temporary and short term in nature.

Sewage Overflows Standard

7.3.3 Hunter Water must ensure that the number of Uncontrolled sewage overflows in a financial year (other than on Public land) does not exceed 6,500.

7.4. Reporting on system performance

Reporting on Water Interruptions

7.4.1 Hunter Water must report on the number of Properties that experience a Planned water interruption, an Unplanned water interruption or an experience as described in clause 7.3.1 of this Licence.

Reporting on Water Pressure

7.4.2 Hunter Water must report on the number of Properties that experience one or more Pressure incidents described in clause 7.3.2 of this Licence.

Reporting on Sewage Overflows

7.4.3 Hunter Water must report on the number of Uncontrolled sewage overflows (other than on Public land) and whether the Uncontrolled sewage overflow occurred in dry weather or wet weather.

Publication of reports

7.4.4 A copy of the reports provided under clause 7.4 must be posted on Hunter Water's website for downloading and also made available at its premises for access or collection by any member of the public, in each case free of any charge imposed by Hunter Water.

7.5. System Performance Indicators

7.5.1 Schedule 4 applies.

7.5.2 Hunter Water must report its performance against the system performance indicators in Schedule 4 and must make the report publicly available by posting it on its website for downloading, and make it available at its premises for access or collection by any member of the public, in each case free of any charge imposed by Hunter Water.

7.6. Keeping of records on Water interruptions, low pressure and Sewage overflows

7.6.1 Hunter Water must maintain such records as are necessary to meet its obligations under clauses 7.3 and 7.4 of this Licence and Schedule 4.

7.6.2 Despite any other obligations in this Licence, Hunter Water must maintain records of the nature and type of Water interruptions, Pressure incidents and Sewage overflows classified by reference to the Suburb in which these interruptions, incidents or overflows occur.

7.7. Report on low pressure areas

7.7.1 Within six months of the Commencement date, Hunter Water must report to IPART on the following matters relating to water pressure that is less than 20 metres head:

- (a) the Suburbs or part thereof in which this is experienced on a consistent and systemic basis;
- (b) the number of Properties affected in each Suburb or part thereof;
- (c) the range of pressure and average pressure received by the Properties affected in each Suburb or part thereof; and
- (d) an analysis of the reasons for low pressure in each Suburb or part thereof, and options for rectification of the low pressure.

8. WATER DEMAND AND SUPPLY

8.1. Definitions

8.1.1 In this Part:

Average residential water consumption means the total quantity of water supplied by Hunter Water to Residential properties in a Reporting period, divided by the number of those Residential Properties.

Discount rate means the rate applied to the future value of costs and benefits to determine its Present value.

Five year rolling average for annual residential water consumption means, in relation to a Reporting date, the number derived by the following formula:

$$A = B/5,$$

where A is the Five year rolling average for annual residential water consumption, and B is the sum of the Average residential water consumption calculated at a Reporting date plus the Average residential water consumption on the four immediately preceding Reporting dates.

IWA publication means the Manual of Best Practice Series entitled Performance Indicators for Water Supply Services, ISBN 1 900222 272, published by the International Water Association (IWA) London 2000 (the "original document") and includes, if that original document is updated or revised, the original document as so updated or revised but only if the updated or revised original document contains a table or otherwise that:

- (a) is the same as or in similar terms to table 4 of the original document; and
- (b) contains parameters for reporting that are the same as or at least as extensive as the parameters in table 4 of the original document.

Large Customer means a Customer whose consumption in a Reporting period exceeds 50,000 kilolitres.

Plan means the plan described in clause 8.3.1.

Present value means the current value of costs and benefits that is derived by discounting the future value of those costs and benefits by the appropriate Discount rate.

Residential Property means a Property:

- (a) whose dominant use is residential; or
- (b) on land categorised as residential under the Local Government Act 1993.

[Note: Residential Property is made up of individual houses, individual strata title units and individual flats that are lived in on a residential basis. Section 516 of the Local Government Act 1993 defines how land is to be categorised as residential.]

Water balance table means the table so described or identified in the IWA publication, which for the avoidance of doubt, in the case of the IWA publication defined as the "original document" is table 4.

Water restriction means a restriction by Hunter Water in the use of water from a Water storage that is authorised by the Minister.

8.2. Interpretation

8.2.1 Where there is a reference to options developed under the integrated water resources plan, this includes an option or any combination of options.

8.3. Integrated Water Resources Plan

Development of the Plan

- 8.3.1 Hunter Water must develop a plan that complies with this part, which in its final form will be known as the Integrated Water Resources Plan ("Plan").
- 8.3.2 Hunter Water must develop a draft of the Plan by no later than 30 September 2002, and must post the draft Plan on Hunter Water's website on the internet on that date for a period of not less than 28 days.
- 8.3.3 Hunter Water must engage in Public consultation in developing the Plan and must take into account comments received as part of the Public consultation process in preparing the final version of the Plan which must be completed by 1 March 2003.
- 8.3.4 The Plan must be posted on Hunter Water's website on the internet for downloading, and made available at its premises for access or collection by any member of the public, free of any access charge imposed by Hunter Water.
- 8.3.5 Hunter Water must regularly review the Plan, of its own motion or as directed by IPART. Hunter Water may amend any material provisions in the Plan only following Public consultation and after taking into account comments received as part of that Public consultation process. Following amendment, the Plan must be made available as required by clause 8.3.4.
- 8.3.6 Hunter Water must report on any material amendments made in accordance with clause 8.3.5.
- 8.3.7 So far as reasonably practicable Hunter Water must, when developing or reviewing the Plan (including the methodology for the Plan), rely on and apply relevant best practice research available in the public domain and endeavour to continually refine and renew its methodologies to reflect current best practice.
- 8.3.8 As part of the Licence review referred to in clause 2.3.1, IPART must evaluate and report on the outcomes achieved by the Plan.

Content and Methodology of the Plan

8.3.9 The Plan must enable Hunter Water to respond to the water needs in the Area of Operations, having regard to the financial, social and environmental costs of all reasonably available options to manage demand and supply of water.

[Note: The Plan is to provide a framework for Hunter Water in long-term water resource planning to meet the needs for water usage in the Area of Operations. The planning approach seeks to identify the optimum solution for meeting future water needs by examining supply and demand factors on an equal and integrated basis.]

8.3.10 The Plan must indicate:

- (a) how Hunter Water will manage supply augmentation, real losses of water from its Water systems and demand for water within its Area of Operations over the next 10 years, and include Present value calculations for 20 years;
- (b) the planning assumptions, including drought management assumptions employed;
- (c) the operational strategy in relation to water resource management; and
- (d) all other relevant matters employed.

8.3.11 The Plan must quantify the maximum reliable quantity of water that Hunter Water can derive from one year to the next, from its existing Water storages, taking into account and quantifying all relevant factors including but not limited to:

- (a) the capacity of the Water storages, and the rates of depletion and recovery of water in the Water storages at current rates of consumption;
- (b) climatic data, trends and projections; and
- (c) constraints on extraction of water to the Water storages, including those imposed by the Water Management Licence.

8.3.12 The Plan must make projections of the total demand for water within Hunter Water's Area of Operations, having regard to relevant factors influencing demand for water, including but not limited to:

- (d) total growth in consumption, including specific growth rates across the residential, commercial and industrial sectors;
- (e) rates and trends in leakage and real losses, in terms of the components of the Water balance table in the IWA publication;
- (f) rates and trends in the demand for Recycled water; and
- (g) actual and potential reductions in demand resulting from Hunter Water's initiatives.

8.3.13 In developing the Plan, Hunter Water must utilise Present value calculations, providing justifications for the Discount rate and other inputs used in the calculations.

Identifying the Options and associated costs

8.3.14 The Plan must identify and evaluate all reasonably practicable options to manage demand and supply of water within its Area of Operations, must define the relevant projected outputs from each option and must list the non-financial advantages and disadvantages of each option.

8.3.15 In evaluating the options identified under clause 8.3.14 Hunter Water must take all necessary steps to ensure that the Plan;

- (a) quantifies the estimated costs of each option identified, which must include the financial (capital and operating), social and environmental costs of each option for each year of the Plan;
- (b) compares the financial, social and environmental costs of each option, in order to determine the least cost option.

8.3.16 If Hunter Water is unable reasonably to quantify the social and environmental costs of the options developed under clause 8.3.15, it must instead quantify such social and environmental costs as it is able and provide a description of those that it is unable to quantify.

8.3.17 Hunter Water must adopt the least cost option determined under clause 8.3.15 unless there are reasonable and substantive reasons for adopting a different option and those reasons are described in detail in the Plan.

Results of the Plan

- 8.3.18 Applying the Plan and the matters in clause 8.3, Hunter Water must outline targets, standards, indicators or other proposals for consideration as part of the Licence review under clause 2.3.1.

Annual Reporting on the Plan

- 8.3.19 Hunter Water must report its performance against the Plan.

8.4. Water Conservation Target

- 8.4.1 Hunter Water must ensure that the five year rolling average for annual residential water consumption calculated at a Reporting date is equal to or less than 215 kilolitres ("Water conservation target").
- 8.4.2 Hunter Water must report its compliance with the Water conservation target.
- 8.4.3 Hunter Water must comply with the Water conservation target until replaced (if at all) by some or all of the proposals in clause 8.3.18 that are approved as part of the review of the Licence Review under clause 2.3.1.

8.5. Water Demand & Supply Indicators

Security of Supply

- 8.5.1 Hunter Water may impose Water restrictions only as approved by the Minister.
- 8.5.2 Hunter Water must report on the nature and length of each Water restriction imposed in a Reporting period and whether (based on information reasonably available to Hunter Water) it is likely to impose a Water restriction in the ensuing Reporting period or at any other time during this Licence.
- 8.5.3 Hunter Water must report on the criteria it applies in determining whether to request that the Minister authorise a Water restriction.
- 8.5.4 Hunter Water must report on the quantity of water (in megalitres) supplied from each Water storage.

Losses from the Water System

- 8.5.5 Hunter Water must report against each of the components in the Water balance table consistent with the definitions and methodology in the IWA publication.
- 8.5.6 Hunter Water must report on the differences in the outcomes in applying clause 8.5.5 between one Reporting period and an immediately preceding Reporting period.

[Note: The Water Services Association of Australia (WSAA) publishes Benchmarking of Water Losses in Australia (incorporating the User Manual for the Benchloss Software), which includes a table showing Standard Components of Water Balance for Australian Transmission or Distribution Systems. The WSAA water balance table if consistent with the IWA publication may be used in compiling the report required by clause 8.5.5.]

Recycled Water

- 8.5.7 Hunter Water must report on the quantity of Recycled water (in megalitres) supplied in a Reporting period for the following applications:
- (a) for industrial or commercial use;
 - (b) for direct use in irrigation; or
 - (c) for uses, other than those described in (a) or (b).

Demand Management

- 8.5.8 Hunter Water must report on the total quantity of water (in megalitres) supplied by it for each of the following :
- (a) consumption by persons in Residential Properties;
 - (b) industrial and commercial uses (excluding use by a Large Customer); and
 - (c) consumption by Large Customers.
- 8.5.9 In its report, Hunter Water must compare each application in 8.5.8, with the corresponding application in the immediately preceding Reporting period, and indicate whether all or some of the following factors, (or other factors of which Hunter Water is aware), contributed to the difference (if any) in the comparison:

- (a) growth in the Customer base;
- (b) climatic impact;
- (c) the nature or extent of consumption of Recycled water; or
- (d) demand management initiatives.

8.6. Annual reporting on Water Demand & Supply Indicators

- 8.6.1 Hunter Water must report its performance against the water demand and supply indicators under clauses 8.5.1 to 8.5.9. The report may be included in the report on the environmental and ESD indicators required under clause 9.2.8.
- 8.6.2 Hunter Water must also publicly display the report provided under clause 8.6.1 on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.

9. ENVIRONMENT – INDICATORS AND PLAN

9.1. Environmental Management Plan

- 9.1.1 Hunter Water must produce a five-year Environmental Management Plan within three months of the Commencement date. After that Hunter Water must produce further five-year Environmental Management Plans every five years.
- 9.1.2 Hunter Water must engage in Public consultation in developing an Environmental Management Plan.
- 9.1.3 The Environmental Management Plan must:
- (a) contain details of Hunter Water's environmental improvement strategies and objectives for its catchments, Water storages, Water supply system, Sewerage system, and Drainage system, as well as the environmental aspects of its other activities such as energy management, waste minimisation and heritage;
 - (b) endorse ESD principles; and
 - (c) be recognised in Hunter Water's business plans.

- 9.1.4 The Environmental Management Plan must set targets and timetables for environmental activities to be undertaken by Hunter Water over the term of the Environmental Management Plan. These targets must utilise the environmental and ESD indicators in clause 9.2 and also the reports, policies and indicators in clauses 9.3 and 10.1.

- 9.1.5 Any material amendments may only be made to the Environmental Management Plan following Public consultation.

- 9.1.6 Hunter Water must report on any material amendments made in accordance with 9.1.5.

- 9.1.7 The Environmental Management Plan must be provided to IPART on its completion and posted on Hunter Water's website on the internet for downloading free of any charges imposed by Hunter Water, made available at its Customer centres for access or collection by any member of the public and lodged with public libraries in the Area of Operations, in each case also free of charge.

9.2. Environmental and ESD Indicators

- 9.2.1 In accordance with this section, Hunter Water must monitor and compile data on indicators of the direct impact of its activities on the environment and the extent to which its Services comply with the principles of ESD, whether such activities and Services are carried out by or on behalf of Hunter Water.
- 9.2.2 Hunter Water must develop a draft list of environmental and ESD indicators within 3 months of the Commencement date.
- 9.2.3 In developing the environmental and ESD indicators, Hunter Water must have regard to the Commonwealth State of the Environment Reporting system and the 'Australia: State of the Environment Environmental Indicator Report' series produced by Environment Australia.
- 9.2.4 The environmental and ESD indicators developed by Hunter Water must be consistent with the scope and objectives of the Environmental Management Plan.
- 9.2.5 The draft list of environmental and ESD indicators developed by Hunter Water must undergo Public consultation.

- 9.2.6 Within 3 months of the close of submissions, following Public consultation under clause 9.2.5, Hunter Water must present a final list of environmental and ESD indicators to the Minister for approval.
- 9.2.7 Hunter Water must commence monitoring and compiling data on the environmental and ESD indicators from the date of approval by the Minister.
- 9.2.8 Hunter Water must report its performance against its environmental and ESD indicators in its annual environment report. Hunter Water must publish the results of the environmental and ESD indicator monitoring in the environment report. The report must specify trends to allow comparison with previous results.
- 9.2.9 The environmental and ESD indicators in clause 9.2.6 must be reviewed as part of the Licence review referred to in clause 2.3.1.
- 9.3. Energy Management**
- 9.3.1 During this Licence, Hunter Water must participate in the Energy Smart Business Program, or similar program administered by SEDDA.
- 9.3.2 Hunter Water must report on any actions or activities undertaken by Hunter Water as part of the Energy Smart Business Program and any other energy management or green power initiatives.
- 10. CATCHMENT MANAGEMENT**
- 10.1. Catchment Report**
- 10.1.1 Hunter Water must report its performance against its catchment management activities, in a report to be known as the Catchment Report. The Catchment Report must include:
- (a) the monitoring results obtained by Hunter Water against the Bulk water quality parameters required by clause 6.3.2 (b) and specified in Schedule 3;
 - (b) details of activities conducted by Hunter Water under the Hunter Water Corporation Limited (Special Areas) Regulation 1997, Williams River Catchment Regional Environment Plan, Regional Planning Strategy and Seaham Weir Operations Plan;
 - (c) details of Hunter Water's performance against the Water Management Licence and the Dam Safety Act 1978;
 - (d) other catchment, landcare or other supporting activities conducted by or on behalf of Hunter Water; and
 - (e) five year water quality trends in the Williams River (at Hunter Water's monitoring point adjacent to Seaham Weir) against the following parameters:
 - (i) total phosphorus;
 - (ii) total nitrogen;
 - (iii) faecal coliforms;
 - (iv) chlorophyll-a;
 - (v) turbidity; and
 - (vi) other parameters as routinely tested and measured by Hunter Water.
- 10.1.2 Hunter Water must also publicly display the report on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.
- 11. OPERATIONAL AUDITS OF THIS LICENCE**
- 11.1. Commission of audits**
- 11.1.1 IPART must initiate an operational audit of Hunter Water as soon as practicable after 30 June each year covering the preceding financial year, as required by this Part (the "Annual audit"). However the first Annual audit under this Licence will cover the period from the Commencement date to 30 June 2003.
- [Note: IPART is to arrange for the conduct of an operational audit covering the financial year 2001/02.]
- 11.1.2 The Annual audit must be conducted by IPART or by a person, other than Hunter Water or its Subsidiary, that IPART considers is suitably qualified to perform the Annual audit.

11.1.3 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.

11.2. What the audit is to report on

11.2.1 IPART or the person undertaking the Annual audit must investigate and prepare a report on the following:

- (a) compliance by Hunter Water with its obligations under Part 5 of this Licence
- (b) compliance by Hunter Water with its obligations under Part 6 of this Licence;
- (c) compliance by Hunter Water with its obligations under Part 7 of this Licence;
- (d) compliance by Hunter Water with its obligations under Part 8 of this Licence;
- (e) Hunter Water's performance under Part 9 of this Licence;
- (f) compliance by Hunter Water with its obligations under Part 10 of this Licence;
- (g) compliance by Hunter Water with its obligations under Part 11 of this Licence;
- (h) on-going compliance by Hunter Water with its Customer Contract and specific areas of non-compliance;
- (i) Hunter Water's compliance with its code of practice and procedure on debt and disconnection under clause 5.3 and any similar initiatives developed by Hunter Water;
- (j) The effectiveness of Hunter Water's internal complaint handling process under clause 12.1 and external dispute resolution scheme under clause 12.2;
- (k) Complaints made against Hunter Water to a court or tribunal under clause 12.3; and
- (l) any other matter required by this Licence or the Act to be assessed or considered as part of the Annual audit.

11.2.2 Despite clause 11.2.1, IPART or the persons undertaking the Annual audit must not investigate a matter under clause 11.2.1 if the investigation of that matter is properly the responsibility of the EPA, NSW Health or the Department of Land and Water Conservation and the relevant agency has undertaken an investigation of the matter. However, IPART may, as part of the Annual Audit:

- (a) report on Hunter Water's implementation of any Memorandum of understanding referred to in clause 3.3;
- (b) satisfy the requirement in clause 11.2.1 to investigate and report on a matter under clause 11.2.1 by including in its report consideration of the findings, the situation at the end of the Licence audit period and Hunter Water's response to the findings, of any investigation of the matter by EPA, NSW Health or the Department of Land and Water Conservation under this clause; and
- (c) request Hunter Water to provide information relating to an investigation of a matter by the EPA, NSW Health or the Department of Land and Water Conservation which is ordinarily within their regulatory activities, in accordance with clause 11.5.

11.2.3 IPART must ensure that, subject to clause 11.2.2, the report of the Annual audit addresses the matters in clause 11.2.1 and advises the Minister on the following matters:

- (a) any failure by Hunter Water to meet operational standards or any other requirements imposed on Hunter Water under this Licence;
- (b) areas in which Hunter Water's performance under this Licence may be improved;
- (c) any changes to the Licence and the Customer Contract that IPART considers necessary;
- (d) any penalties or remedial action required as a result of Hunter Water's performance under the Licence;
- (e) whether the Minister should recommend that Hunter Water's Licence be cancelled by the Governor under Section 18 of the Act for reasons identified in the Annual audit report; and

- (f) any other matter relating to the Annual audit or IPART functions that it considers appropriate.

11.3. Reporting of audit

- 11.3.1 IPART must ensure that the report of the Annual audit is presented to the Minister within 1 month after its receipt by IPART.
- 11.3.2 Unless otherwise directed by the Minister, IPART is to make the report of the Annual audit publicly available within 1 month after its receipt by the Minister by posting it on IPART's website for downloading, and making copies available at its premises for access or collection by any member of the public, in both cases free of charge.
- 11.3.3 Where the Annual audit report has identified non-compliance with this Licence, in addition to whatever other action is taken or required to be taken, the Minister may require Hunter 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 must, unless the Minister otherwise provides, be in a form reasonably acceptable to IPART.

11.4. Additional audits

- 11.4.1 IPART must initiate additional audits of Hunter Water if required by the Minister.
- 11.4.2 An additional audit may address one or more of the matters in clause 11.2.1 or any other matter required by the Minister.
- 11.4.3 The provisions of this Part applying to the Annual audit will apply equally to additional audits under clause 11.4.1 (all necessary changes having been made), to the extent that those provisions are relevant.

11.5. Provision of Information

- 11.5.1 Hunter Water must provide IPART with all information within its possession or under its control (subject to clause 11.5.5) necessary to the conduct of the Annual audit or an additional audit, including whatever information is requested by IPART.

- 11.5.2 The information sought under clause 11.5.1 must be made available within a reasonable time of it being requested.

- 11.5.3 For the purposes of an audit, Hunter Water must, within a reasonable time of being required by IPART or a person appointed by IPART, permit IPART or the person appointed:

- (a) to have access to any works, premises or offices occupied by Hunter Water;
- (b) to carry out inspections, measurements and tests on, or in relation to, any such works, premises or offices;
- (c) to take on to or into any such premises, works or offices any other persons or equipment as necessary for the purposes of performing the audit;
- (d) to inspect and make copies of, and take extracts from, any books and records of Hunter Water that are maintained in relation to the performance of Hunter Water's obligations in accordance with this Licence; and
- (e) to discuss matters relevant to the audit with Hunter Water's employees.

- 11.5.4 If Hunter 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, and such third parties provide information and do the things specified in this Part that extend to Hunter Water as if that third party were Hunter Water.

- 11.5.5 For the purpose of an audit, the information to be provided by Hunter Water or a third party under clause 11.5.4 to IPART or the person appointed by IPART will include information over which Hunter Water, such a third party or other person claims confidentiality or privilege. IPART or the person appointed by IPART is required to enter into reasonable arrangements with Hunter Water or such third party to ensure that the confidential or privileged information is kept confidential.

12. COMPLAINT AND DISPUTE HANDLING

12.1. Internal Complaint Handling Procedures

12.1.1 Hunter Water must establish internal complaints handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Hunter Water.

12.1.2 The internal complaints handling procedures of Hunter Water must be based on the Australian Standard AS4269-1995 Complaint Handling.

12.1.3 Hunter 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.

12.1.4 Hunter Water must provide information of the nature described in clause 12.1.3 to Customers and Consumers through their bills at least once each year. Hunter Water may provide this information in the pamphlet referred to in clause 12.2.6.

12.1.5 The Customer complaint handling, complaint resolution process and Customer redress provided to Customers under the Customer Contract must be reviewed and amended where necessary by Hunter Water to ensure that it is based on the Australian Standard AS4269-1995 Complaint Handling.

12.1.6 Hunter Water must report on the following details concerning complaints made against Hunter Water which are handled by its internal complaints handling procedures:

- (a) the number and types of complaints received on a month by month basis, classified by Suburb into one or more of the following categories:
 - (i) water quality, including health and aesthetic parameters;
 - (ii) continuity of water supply;
 - (iii) water pressure;
 - (iv) Sewage overflow;
 - (v) sewage odour;
 - (vi) Drainage services; and

(vii) Customer billing.

- (b) the number and type of complaints resolved or not resolved (on a month by month basis) in sufficient detail and using sufficient classifications to enable IPART to gain a reasonable understanding of how and how well those complaints were resolved or why complaints were not resolved, as the case may be; and
- (c) any problems of a systemic nature arising from the complaints.

12.2. External Dispute Resolution Scheme

12.2.1 Within 1 month after the Commencement date, Hunter Water must establish a Dispute Resolution Scheme for the resolution by a Dispute Resolution Body of disputes between Hunter Water and its Customers and between Hunter Water and Consumers of the nature described in 12.2.3.

12.2.2 The Dispute Resolution Scheme so established by Hunter Water is subject to the Minister's approval.

12.2.3 The Dispute Resolution Body is to hear disputes relating to complaints made by Customers and Consumers in relation to the following issues:

- (a) water quality, including health and aesthetic parameters;
- (b) continuity of water supply;
- (c) water pressure;
- (d) Sewage overflow;
- (e) sewage odour;
- (f) Drainage services; and
- (g) Customer billing.

12.2.4 The Dispute Resolution Scheme must comply with the minimum standards, so far as applicable, specified in the Benchmarks for Industry-based Consumer Dispute Resolution Schemes released by the Commonwealth Minister for Customs and Consumer Affairs in August 1997.

12.2.5 The Dispute Resolution Scheme must have the following features:

- (a) the decision-making process of the Dispute Resolution Body and administration of the scheme is to be independent from Hunter Water and Subsidiaries of Hunter Water;
- (b) Hunter Water agrees to abide by the decisions of the Dispute Resolution Body in relation to disputes referred to it for resolution;
- (c) the Dispute Resolution Scheme must adopt informal proceedings which discourage a legalistic adversarial approach;
- (d) decisions of the Dispute Resolution Body should be fair and be seen to be fair, by observing the principles of procedural fairness, by making its decisions based upon the information before it, and by having specific criteria upon which its decisions are based;
- (e) the Dispute Resolution Scheme is to operate efficiently by keeping track of disputes referred to it, ensuring complaints are dealt with by the appropriate process and by the Dispute Resolution Body regularly reviewing the operation of the Dispute Resolution Scheme; and
- (f) the Dispute Resolution Scheme is to be free of cost to Customers and Consumers and is to be funded by Hunter Water.

12.2.6 Hunter Water must prepare a pamphlet that explains how the Dispute Resolution Scheme operates and how it can be accessed. The pamphlet should cover both the Internal complaint handling procedures developed under clause 12.1 and the External Dispute Resolution scheme.

12.2.7 Hunter Water must provide the pamphlet to Customers and Consumers through their bills, at least once each year.

12.2.8 Hunter Water must provide IPART with written reports of the determinations made by the Dispute Resolution Body based on information available to Hunter Water and information reasonably obtained from the Dispute Resolution Body.

Where considered appropriate by Hunter 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.

12.2.9 Hunter Water must report on information available to Hunter Water and information reasonably obtained from the Dispute Resolution Body. The report must contain the following information:

- (a) how the scheme works;
- (b) the number and types of complaints received by the Dispute Resolution Body, classified by Suburb into one or more of the following categories:
 - (i) water quality including health and aesthetic parameters;
 - (ii) continuity of water supply;
 - (iii) water pressure;
 - (iv) Sewage overflow;
 - (v) sewage odour;
 - (vi) Drainage services; and
 - (vii) Customer billing; and
- (c) in relation to (b), a summary of:
 - (i) the outcome of those complaints;
 - (ii) the time taken to resolve complaints;
 - (iii) the procedure for resolving complaints;
 - (iv) any problems of a systemic nature arising from the complaints; and
- (d) any other relevant information required by IPART to be included in the report.

12.2.10 Hunter Water must also publicly display the report provided under clause 12.2.9 on its website on the internet for downloading free of any charges imposed by Hunter Water, and make it available at its premises for access or collection by any member of the public free of charge.

12.3. Complaints to other bodies

12.3.1 Hunter Water must report on complaints made against Hunter Water to a court or tribunal, such as the Consumer Trader and Residential Tribunal, (based on information available from these bodies and Hunter Water itself as a party to the complaint) containing the following details:

- (a) the number and types of complaints received by such other bodies;
- (b) the outcome of complaints;
- (c) how the complaints were resolved;
- (d) any problems of a systemic nature arising from the complaints; and
- (e) any other relevant information required by IPART to be included in the annual report.

13. PRICING

13.1.1 Hunter 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 Hunter Water's Services determined from time to time by IPART.

[Note: Division 6 of part 5 of the Act governs the nature of fees and charges which may be imposed by Hunter Water. Under the terms of the IPART Act, Hunter 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.]

14. LIABILITY ISSUES

14.1. Contracting out

14.1.1 Subject to the Act, SOC Act and any other applicable law, Hunter Water may contract out the provision, construction, operation, management or maintenance of any of the Systems and Services that are the subject of this Licence.

14.1.2 Contracting out under clause 14.1.1 does not relieve Hunter Water of its responsibility to comply with its obligations under this Licence.

14.2. Damage and Compensation to Persons

14.2.1 Hunter Water is required by Section 22 of the Act to do as little damage as practicable in exercising its functions under Division 2 of Part 5 of the Act, and in circumstances specified in that provision, to compensate persons who suffer damage by the exercise of those functions.

14.3. Competitive Neutrality

14.3.1 Subject to the Act, the SOC Act and any applicable law, Hunter 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.

14.3.2 This Part is in addition to any obligations of Hunter 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.]*

15. NOTICES

15.1.1 Schedule 5 applies.

SCHEDULE 1

1. AREA OF OPERATIONS

- 1.1.1 The islands in that part of the Hunter River between the confluence with the Williams River and the entrance of the Hunter River (including Newcastle Harbour).
- 1.1.2 Any land under the waters of that part of the Hunter River between its confluence with the Williams River and the entrance of the Hunter River (including Newcastle Harbour) upon which there is erected any wharf, pier, jetty, building or other structure.
- 1.1.3 The Cities of Newcastle, Maitland, Cessnock and Lake Macquarie.
- 1.1.4 The Shire of Port Stephens.
- 1.1.5 Those parts of the Shire of Singleton described as follows:
- (a) All that area of land situated at Branxton in the Parish of Branxton County of Northumberland in the State of New South Wales commencing at a point being the south-western corner of Portion 91 in the Parish of Branxton bounded thence on the south by the southern boundaries of Portions 91, 90 and 89 easterly to a point on the western boundary of McMullins Road bounded thence once again on the south by a line on the prolongation of the southern boundary of Portion 89 aforesaid easterly to the south western corner of Portion 101 bounded thence again on the south by the southern boundaries of Portions 101 and 103 easterly to a point on the western boundary of Portion 102 bounded thence on the west by part of that boundary southerly to a point on the northern boundary of Portion 97 bounded thence on the south by part of the northern boundary of Portion 97 and the northern end of a Reserved Road easterly to a point on the western boundary of Lot 4 in Deposited Plan 533318 bounded thence on the west by part of that boundary southerly to a point on the north-western boundary of Dalwood Road bounded thence again on the west by a line on the prolongation of the western boundary of Lot 4 aforesaid southerly to the north-western corner of Lot 1 in Deposited Plan 237057 bounded thence on the west by the western boundary of Lot 1 aforesaid

southerly to its south-western corner bounded thence on the south by the southern boundaries of Lots 1, 2, 3, 4 and 5, Deposited Plan 237057 easterly to the south-western corner of Lot 9 in Deposited Plan 237057 bounded thence on the east and the south by the western and northern boundaries of Lot 9 aforesaid northerly and easterly to a point on the western boundary of a road 20.115 metres wide bounded thence on the east by the western boundary of that road and the eastern boundaries of Lots 8, 7 and 6 in Deposited Plan 237057 northerly to a point on the south-eastern boundary of Dalwood Road bounded thence again on the east by a line on the prolongation of the eastern boundary of Lot 6 aforesaid northerly to the south-western corner of Lot 1 in Deposited Plan 570761 bounded thence on the east and south by the western and part of the northern boundaries of Lot 1 in Deposited Plan 570761 northerly and easterly to the south-western corner of Lot 1 in Deposited Plan 178671 bounded thence on the east by the western boundary of Lot 1 in Deposited Plan 178671 and part of the western boundary of Lot 102 in Deposited Plan 630223 northerly to the south-eastern corner of Lot 6 in Deposited Plan 242267 bounded thence on the northwest by the south-eastern boundaries of Lots 6, 5, 4 and 3 in Deposited Plan 242267 south-westerly to a point on the eastern boundary of Lot 3 in Deposited Plan 19331 bounded thence on the west by part of that boundary southerly to the south-eastern corner of Lot 3 in Deposited Plan 19331 bounded thence on the north-west by the south-eastern boundaries of Lots 3 and 4 in Deposited Plan 19331 south-westerly to the south-western corner of Lot 4 aforesaid bounded thence on the east by part of the western boundary of Lot 4 in Deposited Plan 19331 northerly to the south-eastern corner of Lot 7 in Deposited Plan 241035 bounded thence on the north by the southern boundaries of Lots 7, 6, 5, 4, 3, 2 and 1 in Deposited Plan 241035 westerly to a point on the eastern boundary of McMullins Road bounded thence on the south by a line on the prolongation of the southern boundary of Lot 1 in Deposited Plan 241035 westerly to a point on the western boundary of McMullins Road bounded thence on the north-east by the south-western boundary of McMullins Road northwesterly to the south-eastern corner of Lot 6 in Deposited Plan

- 539087 bounded thence on the north by part of the southern boundary of Lot 6 aforesaid westerly to the north-eastern corner of Lot 2 in Deposited Plan 539084 bounded thence on the west and north by the eastern and southern boundaries of Lot 2 aforesaid southerly and westerly to a point on the eastern boundary of Elderslie Road bounded thence on the west by part of the eastern boundary of Elderslie Road southerly to the eastern prolongation of the southern boundary of Lot 12 in Deposited Plan 595347 bounded thence on the north by that prolongation and the southern boundary of Lot 12 aforesaid westerly to a point on the eastern boundary of Part Portion 68 in the Parish of Branxton County of Northumberland bounded thence on the west by that boundary southerly to a point on the northern boundary of Portion 195 bounded thence on the south by part of that boundary easterly to a point on the western boundary of Elderslie Road bounded thence on the east by part of the western boundary of Elderslie Road northerly to the western prolongation of the southern boundary of Portion 91 bounded thence on the south by that prolongation easterly to the point of commencement; and
- (b) All that area of land situated at Branxton in the Parish of Branxton County of Northumberland in the State of New South Wales being part of Lot 1 in Deposited Plan 803446 commencing at a point being the south-western corner of Portion 24 in the Parish of Branxton County of Northumberland bounded thence on the east by the western boundaries of Portion 24 aforesaid Lot 2 and Lot 1 in Deposited Plan 609579 northerly to the north-western corner of Lot 1 aforesaid bounded thence again on the east by a line on the prolongation of the western boundary of Lot 1 northerly to the southern boundary of the Great Northern Railway bounded thence generally on the north by that boundary westerly to the left bank of Black Creek bounded thence generally on the west by the bank of that Creek southerly to the northern prolongation of the eastern boundary of Portion 44 in the Parish of Belford County of Northumberland bounded thence on the west by that prolongation and the eastern boundary of Portion 44 aforesaid southerly to the northern boundary of the Parish of Rothbury County of Northumberland bounded thence on the south by part of that boundary easterly

to a point being the intersection of that boundary and the southern prolongation of the western boundary of Portion 24 Parish of Branxton bounded thence on the east by a line on that prolongation northerly to the point of commencement.

- 1.1.6 Any other land occupied by the Licensee's works at the Transfer Date and any other Properties connected to a water or sewer main of the Licensee at the Transfer Date.
- 1.1.7 Any other land specified by the Governor by order published in the Gazette.

SCHEDULE 2

1. CUSTOMER CONTRACT

SCHEDULE 2 IS THE CUSTOMER CONTRACT AND IS PUBLISHED AS A SEPARATE DOCUMENT.

SCHEDULE 3

1. BULK WATER MONITORING PARAMETERS

1.1 Pesticides

Aldrin	HCB	Heptochlor
BHC	DDT	Lindane
Chlordane	DDD	PCB
DieldrinDDE		

1.2 Chemical

Antimony	Copper	Selenium
Arsenic	Cyanide	Sodium
Barium	Iodide	Sulphide
Beryllium	Lead	Tin
Boron	Mercury	Zinc
Cadium	Nickel	Silver
Chromium	Molybdenum	

1.3 Radiological

Gross alpha	Gross beta
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SCHEDULE 4

1. SYSTEM PERFORMANCE INDICATORS

1.1 Preamble

The auditor appointed under clause 11.1.2 will only audit whether Hunter Water has produced the reports required under this Schedule and whether those reports are accurate, complete and have been provided by the time and in the manner required by this Schedule.

1.2 Reporting on Water interruptions

1.2.1 Hunter Water must report on the number of Properties affected by Planned water interruptions and Unplanned water interruptions where the duration of the Water interruption is:

- (a) less than 1 hour;
- (b) between 1 hour and 5 hours;
- (c) between 5 hours and 12 hours;
- (d) between 12 hours and 24 hours; and
- (e) more than 24 hours.

1.2.2 Hunter Water must report on the number of Properties affected by Water interruptions:

- (a) on two occasions;
- (b) on three occasions;
- (c) on four occasions; or more in a Reporting period.

1.2.3 Hunter Water must report on the number of Properties affected by a Planned water interruption that did not commence at the time specified in the notice.

1.2.4 If during a Reporting period, 250 or more Properties were affected in a single event by either a Planned water interruption or an Unplanned water interruption, either of which is longer than 5 hours, Hunter Water must report on the events that resulted in those Properties being so affected.

1.3 Reporting on Water Pressure

1.3.1 Hunter Water must report on the number of Properties, not in a low pressure area, that experienced more than one Pressure incident in a financial year.

1.4 Reporting on Sewage Overflows

1.4.1 Hunter Water must report on the number of Uncontrolled sewage overflows (other than on Public land) in dry weather caused or resulting from:

- (a) a blockage in the main pipe in the Sewerage system;
- (b) a blockage in a branch pipe in the Sewerage system;
- (c) Third party damage; or
- (d) an event other than one described in (a), (b) or (c).

1.4.2 Hunter Water must report on:

- (a) the number of Priority 1 sewage overflows to which it responded in less than one hour and those to which it responded in more than one hour.
- (b) the number of Priority 2 sewage overflows to which it responded in less than 3 hours and those to which it responded in more than three hours.

1.4.3 Hunter Water must report on the number of Uncontrolled sewage overflows on Public land that occurred in dry weather and in wet weather.

1.4.4 Hunter Water must report on the number of Properties affected by an Uncontrolled sewage overflow in dry weather where the period since the last Uncontrolled sewage overflow in dry weather on that Property is less than 12 months.

1.4.5 Hunter Water must report on the number of Public land locations affected by more than one Sewage overflow (whether occurring in wet or dry weather) where the period since the last Sewage overflow at that location (or in the vicinity of that location) is less than 12 months.

2. DEFINITIONS

2.1.1 Expressions used in this Schedule that are defined in clause 7.1 of the Licence have the meaning given to them in clause 7.1.

2.1.2 In this Schedule:

Priority 1 sewer overflow means a Sewage overflow caused by a break, collapse, blockage or overloading of the Sewerage system that results in or contributes to:

- (i) personal injury, illness, disease or disability or a significant risk of or increased risk of personal injury, illness, disease or disability;
- (ii) significant damage to goods, fixtures or buildings, including an overflow inside a building;
- (iii) significant environmental impact, including an overflow outside a building where there is significant risk to health, whether or not it is an impact that Hunter Water is required by law to report, or
- (iv) an interruption of the Sewerage service.

Priority 2 sewer overflow means a Sewage overflow caused by a cracked pipe or partial blockage within the Sewerage system that results in or contributes to:

- (i) minor damage to goods, fixtures or buildings; or
- (ii) minor environmental impact (including unpleasant odours) not posing a significant health risk, whether or not it is an impact that Hunter Water is required by law to report.

3. INTERPRETATION

- 3.1 Clause 7.2 of this Licence applies to this Schedule in the same way as it applies to Part 7 of the Licence.

SCHEDULE 5

1. ADDRESS FOR NOTICES

1.1 Address Details

Any notice or other communication under this Licence between IPART and Hunter Water must be in writing and addressed as follows:

Hunter Water Corporation
Managing Director
Hunter Water Corporation
593-605 Hunter Street
NEWCASTLE WEST NSW 2302

Independent Pricing and Regulatory Tribunal
Tribunal Chairman
Independent Pricing and Regulatory Tribunal
Level 2
44 Market Street
SYDNEY NSW 2000

1.2 Receipt of communication

A notice will be considered received:

- (a) if delivered in person, when delivered;
- (b) if delivered by mail, 5 days from and including the date of postage;
- (c) if delivered by electronic communication, upon actual receipt of the communication by the recipient.

1.3 Amendment to address details

An addressee named in clause 1.1 of this Schedule may change its address particulars by notice to the other addressee named in that clause.

ACCOUNT & GENERAL ENQUIRIES

1300 657 657

24 HOUR EMERGENCY & SERVICE FAULTS

1300 657 000

VISIT OUR WEBSITE AT

www.hunterwater.com.au

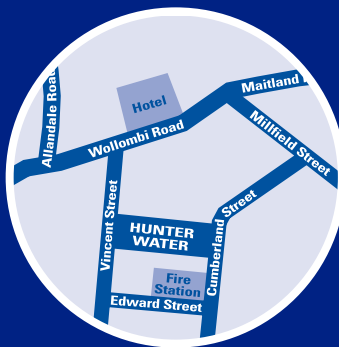
DIRECT EMAIL ENQUIRIES TO

enquiries@hunterwater.com.au



BOOLAROO OFFICE

143 MAIN ROAD
OPPOSITE COUNCIL



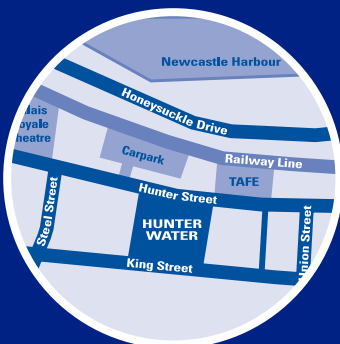
CESSNOCK OFFICE

16 VINCENT STREET
WOLLOMBI ROAD END



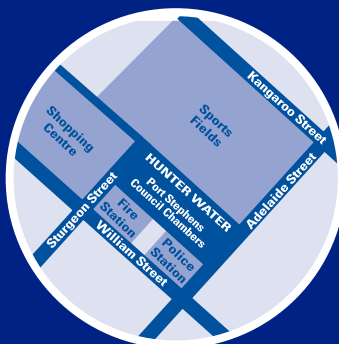
MAITLAND OFFICE

285 HIGH STREET
IN COUNCIL CHAMBERS



NEWCASTLE OFFICE

595 HUNTER STREET
GROUND FLOOR ON RIGHT



RAYMOND TERRACE OFFICE

118 PACIFIC HIGHWAY
IN COUNCIL CHAMBERS



Appendix C

Ministerial Requirements

ATTACHMENT 1 SUMMARY OF THE MINISTER'S COMMENTS ON THE 2003/2004 OPERATIONAL AUDIT

Issue	Comment
Water supply continuity	<p>The Minister endorsed the auditor's recommendation requiring Hunter Water to:</p> <p><i>"Continue to review its maintenance/operational practices to identify additional procedural and/or technological practices to enable it to better meet its water supply continuity Licence requirement."</i></p> <p><i>"Continue to utilise and trial its maintenance/operational practices identified during the reviews undertaken over the 2003/2004 year to reduce the extent and duration of planned water interruptions required to connect new developments to HWC's system."</i></p> <p><i>"Continue to undertake condition assessments for its trunk mains to better identify trunk mains at risk of failure and respond with proactive maintenance."</i></p> <p>Review its systems/procedures/practices/contingency plans to allow HWC to respond more quickly to:</p> <ul style="list-style-type: none"> • Locate failures/bursts, particularly for its trunk mains • Minimise the number of customers affected by any failure by shutting down the trunk main and/or supplying customers from other sources; • Repair the failure; and • Return the trunk main to service, resupplying customers affected. <p><i>"Consider as part of any review of response procedures the installation of additional pressure/flow monitoring devices linked to HWC's existing telemetry system to enable the location of future trunk main failures to be more accurately pinpointed."</i></p>

Appendix D

Summary of Performance Indicators
for 2004/05 and Performance
Indicator Trend Information

HUNTER WATER CORPORATION

SYSTEM PERFORMANCE INDICATORS

(SCHEDULE 4)

2004-05 YEAR



*caring
for our
community
and the
environment*

The following system performance indicators are specified under the Hunter Water Corporation Operating Licence as set by IPART. The Corporation is required by the Licence to report its performance against these indicators.

Clause 1.2 Water Interruptions

Clause 1.2.1 Number of Properties affected by Planned and Unplanned water interruptions where the cumulative duration of the interruption is:

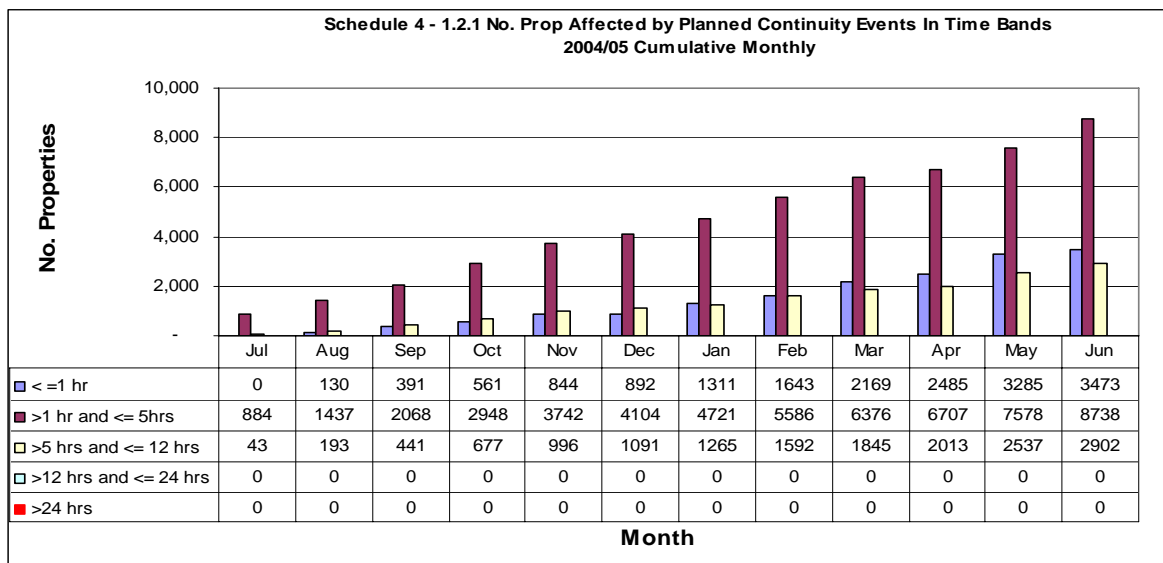
- (a) Less than 1 hr (≤ 1 hr)
- (b) Between 1 and 5 hrs (> 1 hr & ≤ 5 hrs)
- (c) Between 5 and 12 hrs (> 5 hrs & ≤ 12 hrs)
- (d) Between 12 and 24 hrs (> 12 hrs & ≤ 24 hrs); and
- (e) More than 24 hrs (> 24 hrs)

The data presented for this indicator shows each planned and unplanned water interruption event by the five different time categories as specified in the Operating Licence. The time categories are:

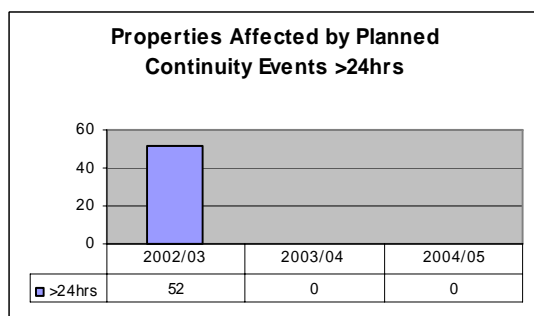
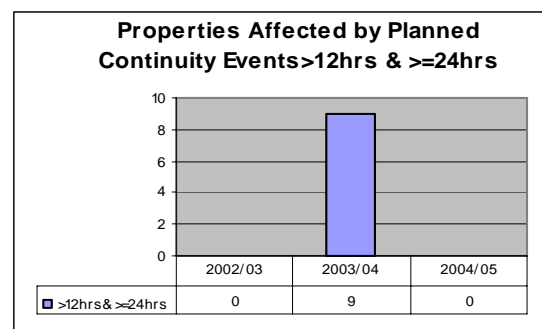
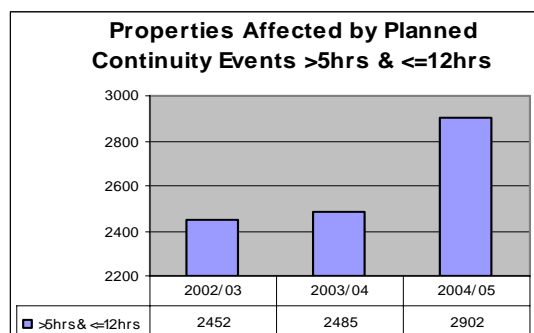
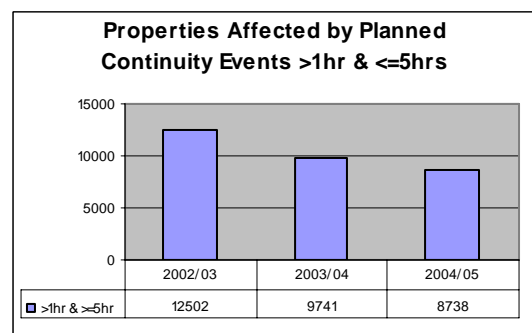
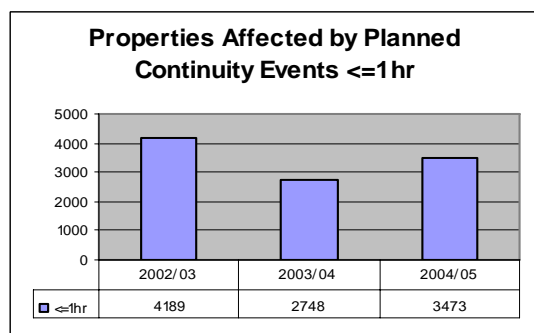
- Less than 1 hr (≤ 1 hr)
- Between 1 and 5 hrs (> 1 hr & ≤ 5 hrs)
- Between 5 and 12 hrs (> 5 hrs & ≤ 12 hrs)
- Between 12 and 24 hrs (> 12 hrs & ≤ 24 hrs); and
- More than 24 hrs (> 24 hrs).

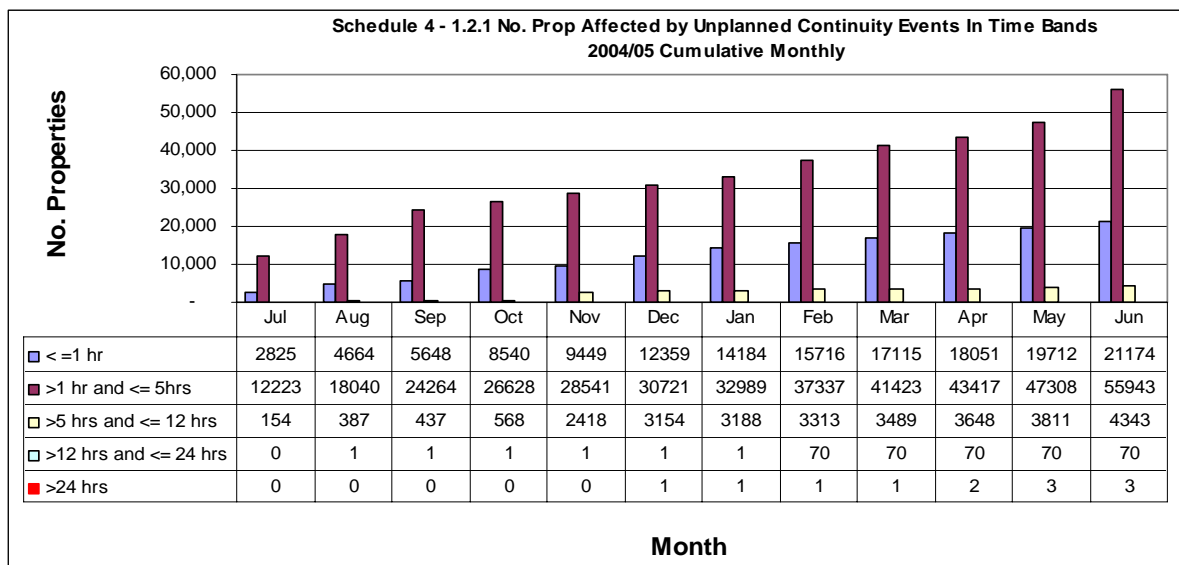
While the events and time categories are reported separately (i.e. there is no cumulative reporting of interruptions), the charts show cumulative time category totals by month for the licence year.

For example, a single property could experience a planned interruption of say 0.8 hrs and another planned event of 4.8 hrs later in the year. The property will be counted twice, with one count in each of the first and second time categories (i.e. category (a) for the first event and category (b) for the second event). The combined total of 5.6 hrs planned interruption would not be included in the third time category (i.e. category (c)) because each interruption event is counted individually. From this perspective the property counts in the 5 time categories are not mutually exclusive.

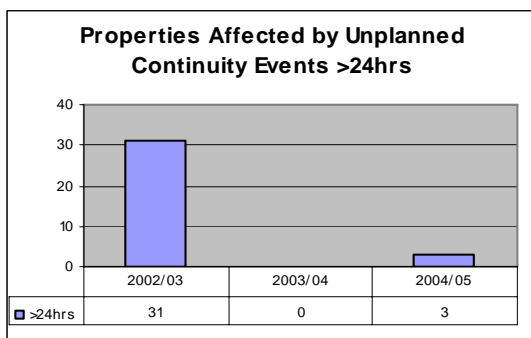
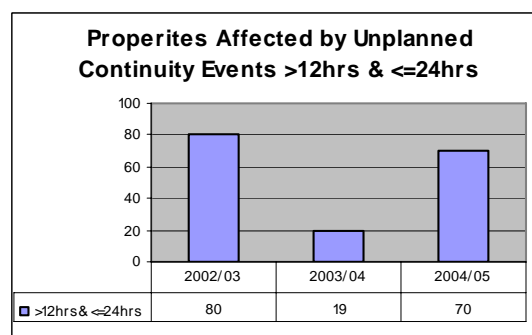
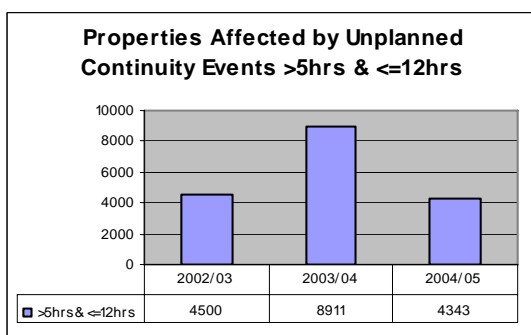
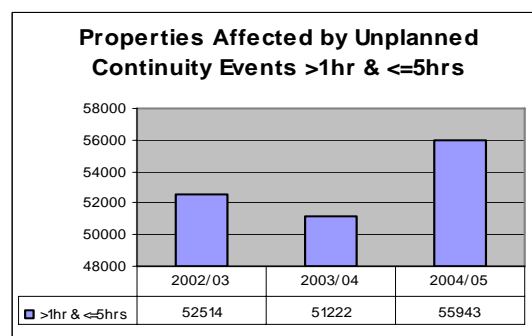
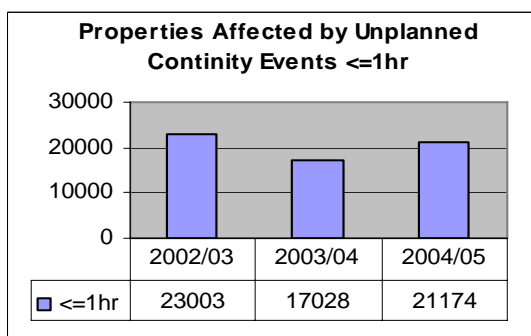


Three Year Trend Data for Number of Properties affected by Planned Water Supply Interruptions added by Parsons Brinckerhoff Australia Pty Ltd as follows:



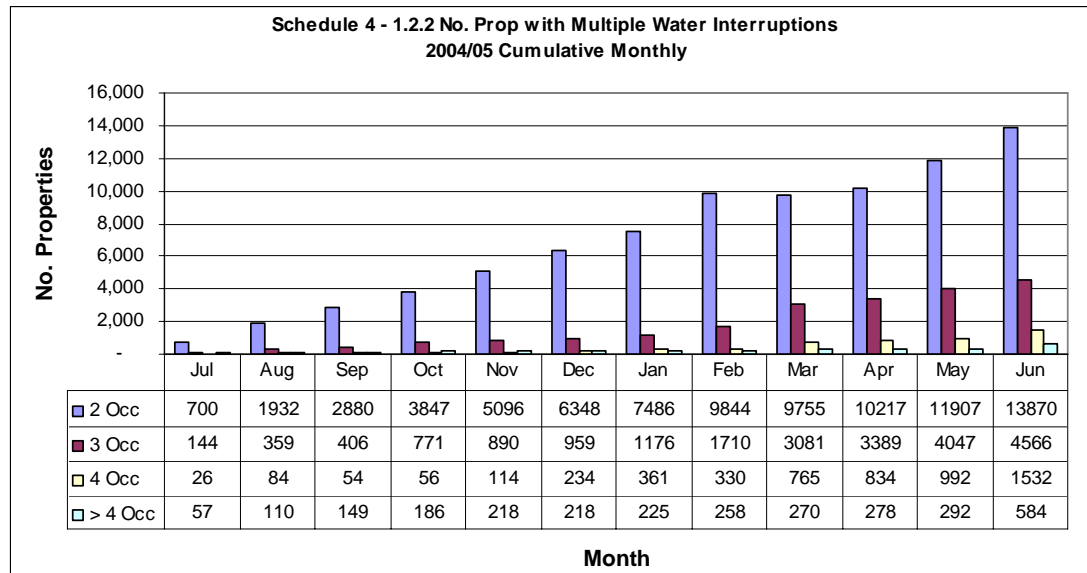


Three Year Trend Data for Number of Properties affected by Unplanned Water Supply Interruptions added by Parsons Brinckerhoff Australia Pty Ltd as follows:

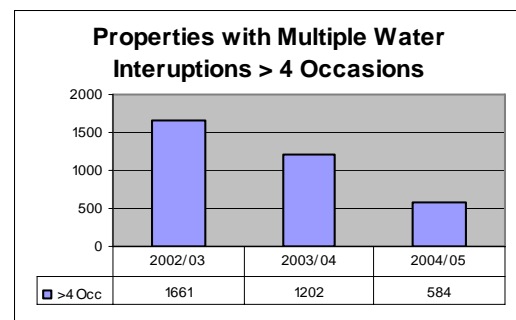
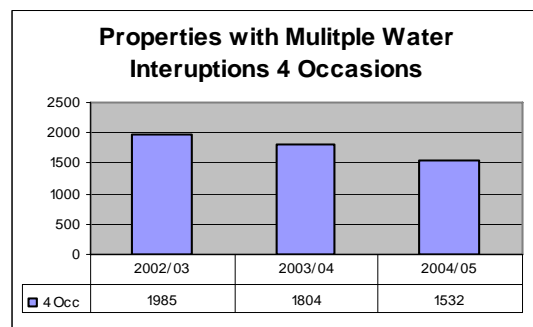
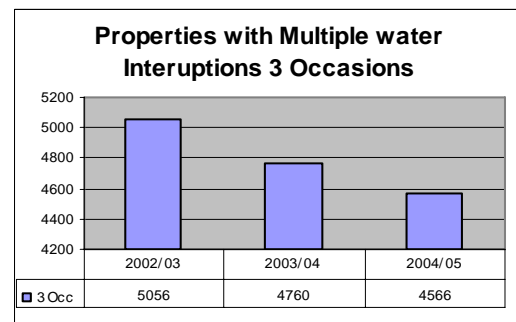
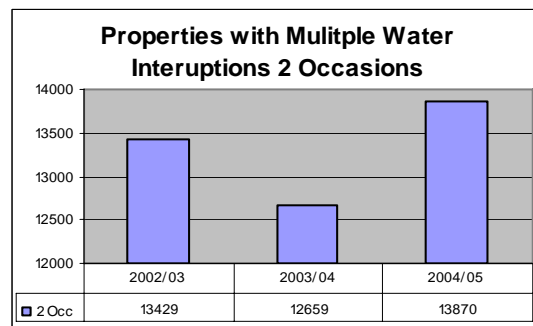


Clause 1.2.2 Number of Properties affected by Water interruptions
(whether a Planned or an Unplanned water interruption):

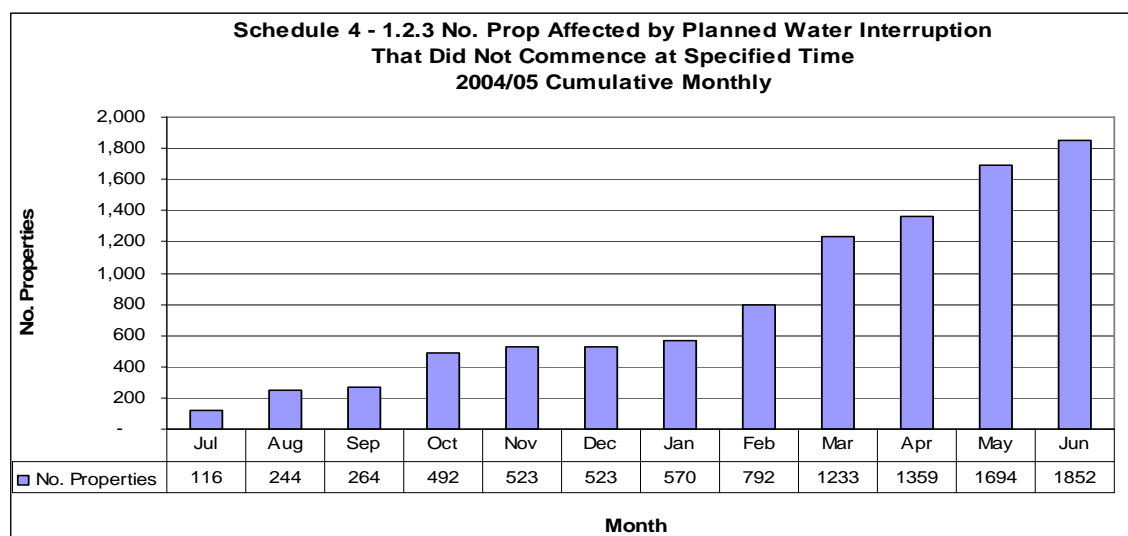
- (a) On two occasions
- (b) On three occasions
- (c) On four occasions; or more



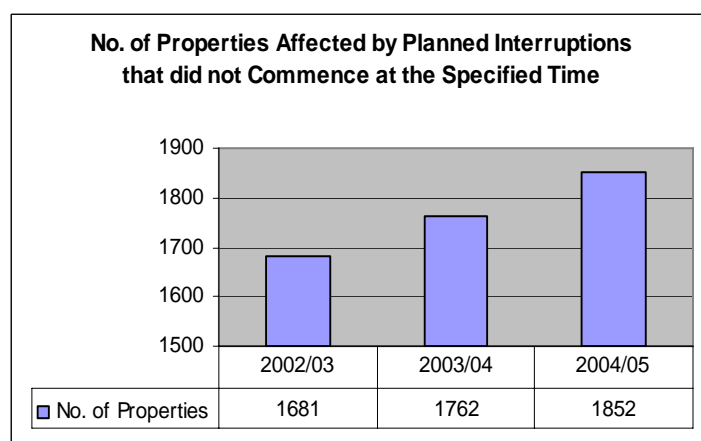
Three Year Trend Data for Number of Properties affected by Multiple Water Supply Interruptions added by Parsons Brinckerhoff Australia Pty Ltd as follows:



Clause 1.2.3 Number of Properties affected by a Planned water interruption that did not commence at the time specified in the notice.



Three Year Trend Data for Number of Properties affected by Planned Interruptions that did not commence at the specified time added by Parsons Brinckerhoff Australia Pty Ltd as follows:



Water interruptions are generally caused by the need to shut down watermains for the purpose of either undertaking repairs due to operational problems or alternatively for issues such as the creation of new connections or extension of services. By far the greatest number of supply interruptions in Hunter Water's operational area are a result of operational problems and as such the work is often reactive in nature and shut down notices cannot be provided beforehand. For issues such as new connections, extension to new services etc the work can be programmed in advance and notice can be given to affected customers. It is generally these types of new works which are undertaken by way of planned shutdowns.

Watermain breaks and leaks are generally reported to Hunter Water by members of the community and based on information collected at the time of the call these can be categorised as a Priority 1, 2 or 3 maintenance tasks.

Generally category 3 maintenance tasks are designated that way because the nature of the leak is minor and there is a good chance that the work to repair the main can be undertaken without necessitating a watermain shutdown. That is, a repair clamp can be installed on the main under pressure. From this perspective category 3 maintenance tasks are often scheduled for times which may be a number of days after the initial call.

Category 3 jobs are therefore considered to be scheduled jobs in terms of our work allocation for resource management but they are not deemed to be planned jobs in the context of planned or unplanned shutdowns for customers. As such they have not been incorporated into these statistics.

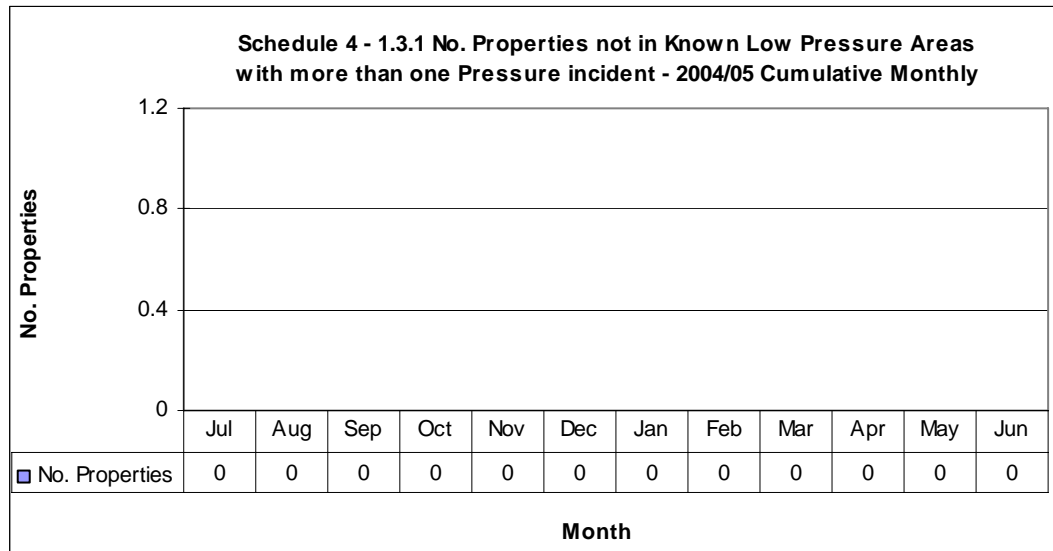
Most of the jobs that did not commence at the specified time were maintenance, contract connection, watermain replacement or minor leak jobs in categories 2 or 3 (i.e. lower priority work). The main reason for the failure to commence the work on time was due to other higher priority jobs which are attended by the same work crews. The planned jobs not commenced on time represent about 11% of the total number planned jobs or 12% of the properties affected by planned events for the year.

Clause 1.2.4 Detail of events where 250 or more Properties were affected in a single event by either a Planned or an Unplanned water interruption either of which is longer than 5 hrs.

Job No	Date of Interruption	Location	No. Properties	Duration (hr)
165996	02-Nov-04	Easton Av, Tarro	1702	5.5
<i>A number of breaks occurred in the Beresfield/Tarro areas when the 900mm Chichester Trunk Gravity Main (CTGM) near Easton Ave, Tarro was re-charged after maintenance works. At the same time, a break occurred on the 900mm CTGM at Millers Forest.</i>				
170249	29-Dec-04	Buruda St, Mayfield West	362	5.9
<i>Unplanned watermain failure on a 100mm main near Buruda St, Mayfield West. The shutdown affected more properties than expected because of closed and faulty vales in the area.</i>				
173127	17-Feb-05	Hall Rd, Raymond Terrace	252	6.8
<i>Planned shutdown for 3x375mm new connections near Mount Hall Rd, Raymond Terrace.</i>				

Clause 1.3 Water Pressure

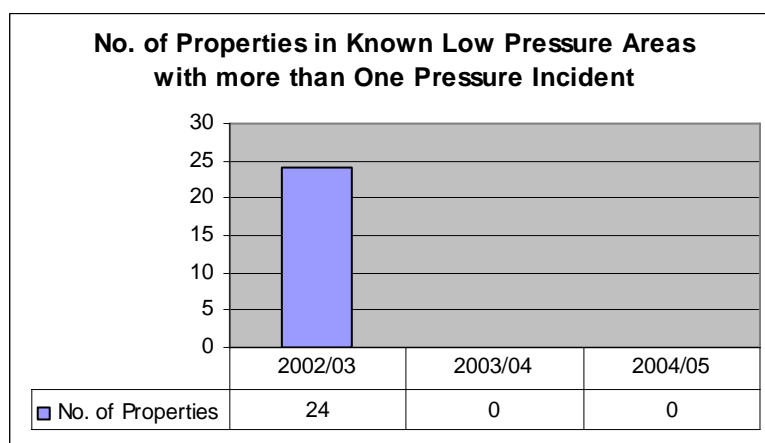
Clause 1.3.1 Number of Properties not in a low pressure area that experienced more than one Pressure incident in a financial year.



The table above shows that no property outside known low pressure areas experienced more than one pressure incident. This indicator was to pick up repeat pressure events that occurred outside of:

1. Areas designated as permanently below 20 metres (due to historical design standards).
2. Areas that may have fallen below 20 metres (based on computer modelling) under prevailing water demands during the licence period.

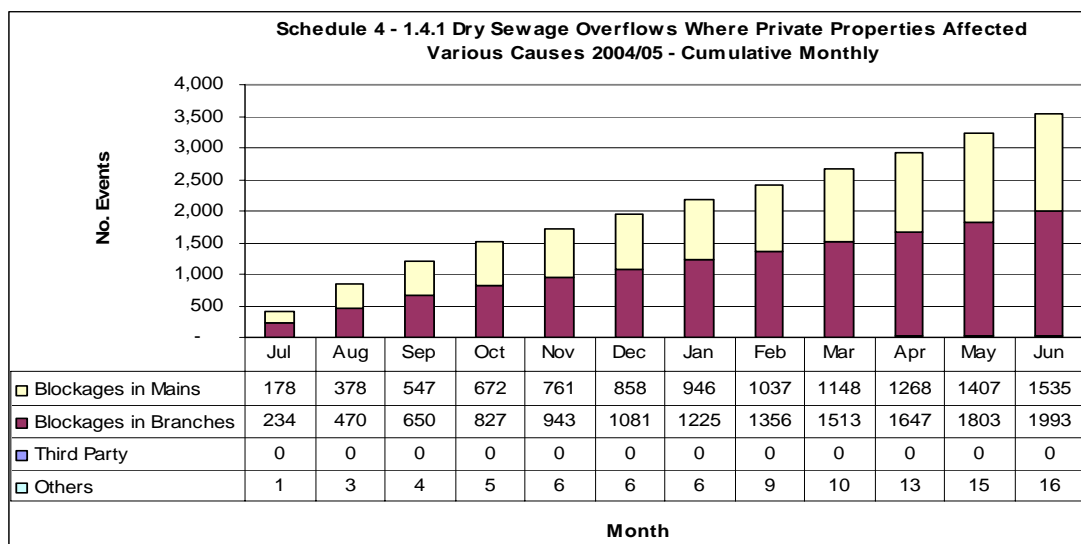
Three Year Trend Data for Number of Properties not in known Low Pressure Ares with more than one Pressure Incident added by Parsons Brinckerhoff Australia Pty Ltd as follows:



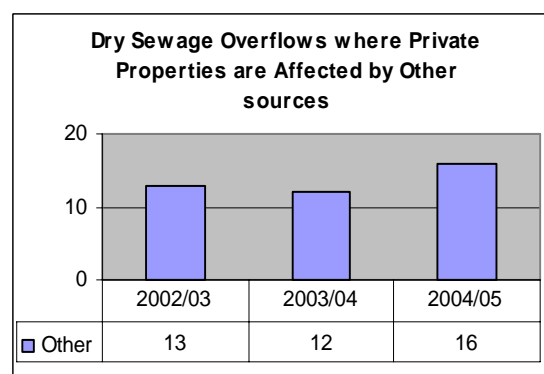
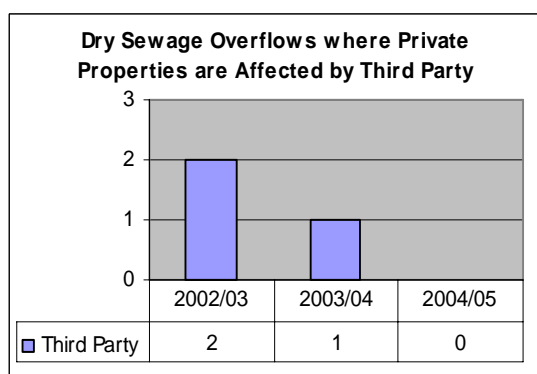
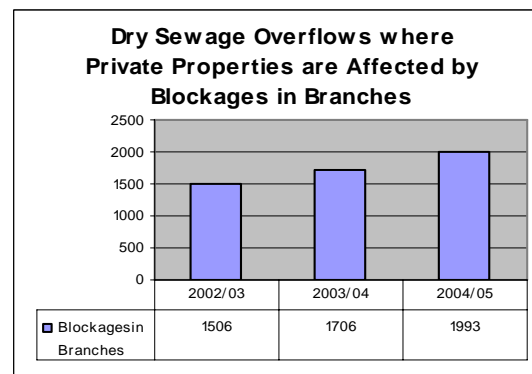
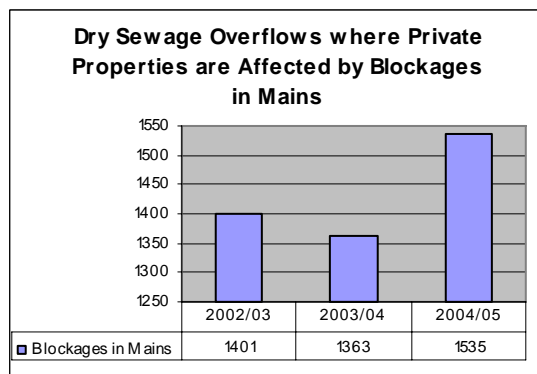
Clause 1.4 Sewage Overflows

Clause 1.4.1 Number of Uncontrolled sewage overflows (other than on Public land) in dry weather caused or resulting from:

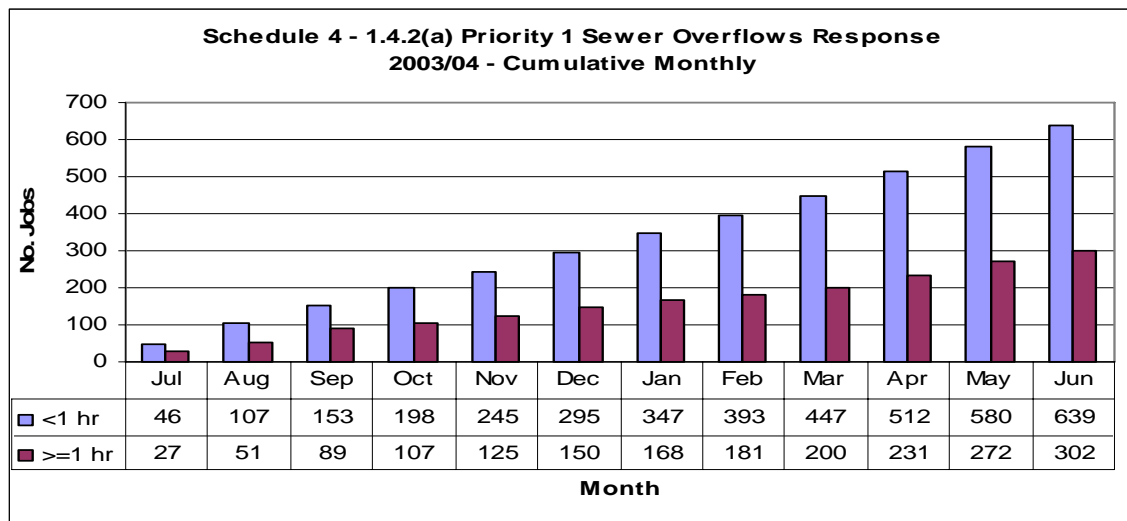
- (a) A blockage in the main pipe
- (b) A blockage in a branch pipe
- (c) Third party damage; or
- (d) An event other than one described in (a), (b) or (c)



Three Year Trend Data for Number of Private Properties affected by Dry Sewage Overflows caused by blockages in mains added by Parsons Brinckerhoff Australia Pty Ltd as follows:

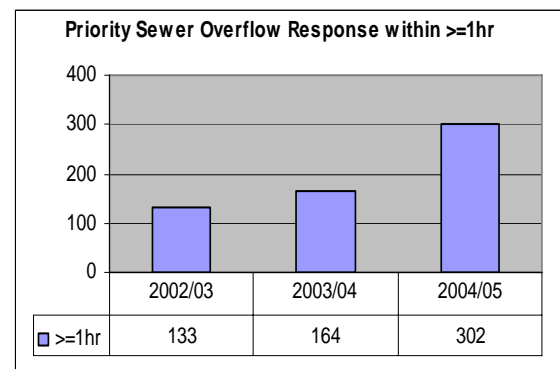
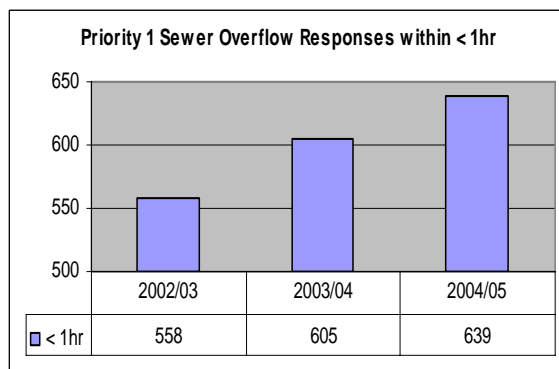


Clause 1.4.2 (a) Number of Priority 1 sewage overflows to which the Corporation responded in less than one hour and those to which it responded in more than one hour.

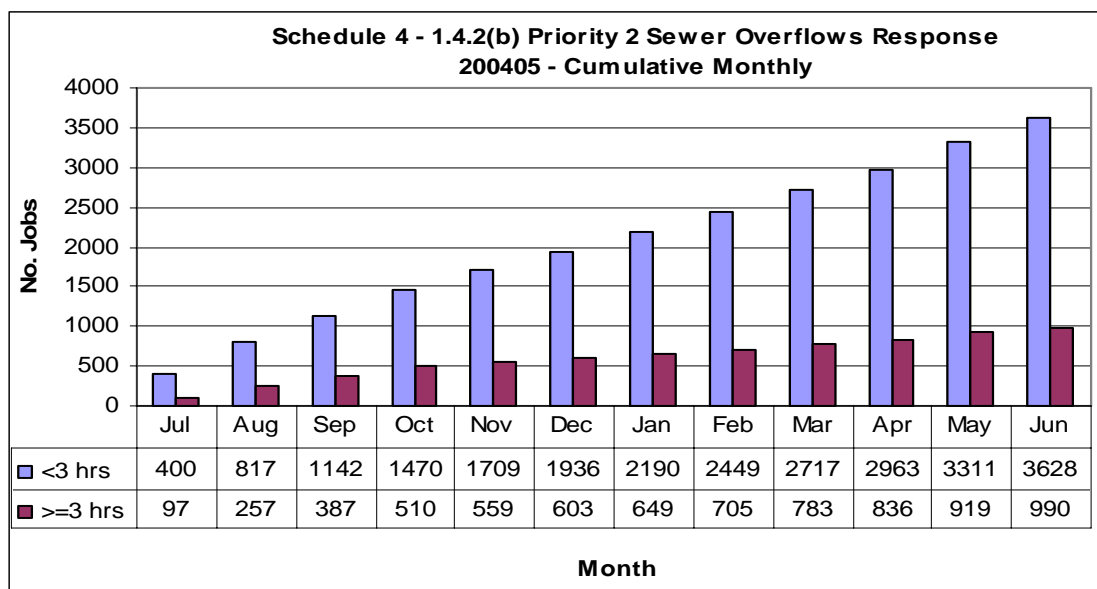


Of the events that were not responded to within the 1 hour period the vast majority (176) were responded to inside two hours. A small number took three to four hours with 37 jobs being in excess of four hours.

Three Year Trend Data for Priority 1 Sewer Overflows responded to in less than 1 hour or more than 1 hour added by Parsons Brinckerhoff Australia Pty Ltd as follows:



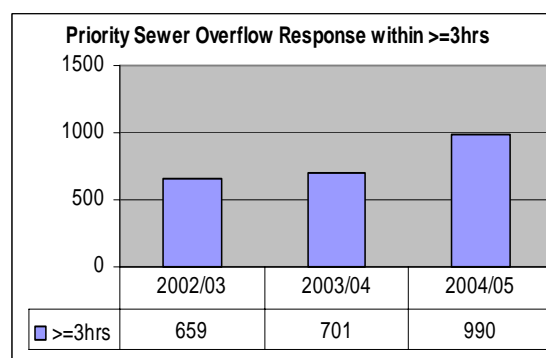
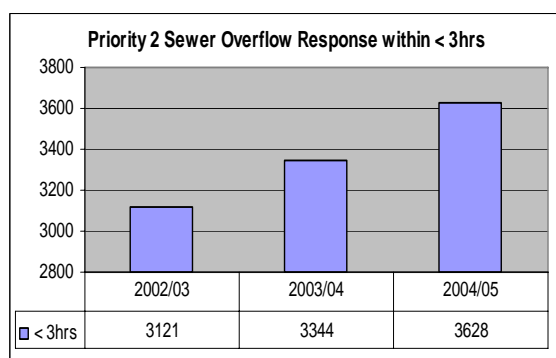
Clause 1.4.2 (b) Number of Priority 2 sewage overflows to which the Corporation responded in less than three hours and those to which it responded in more than three hours.



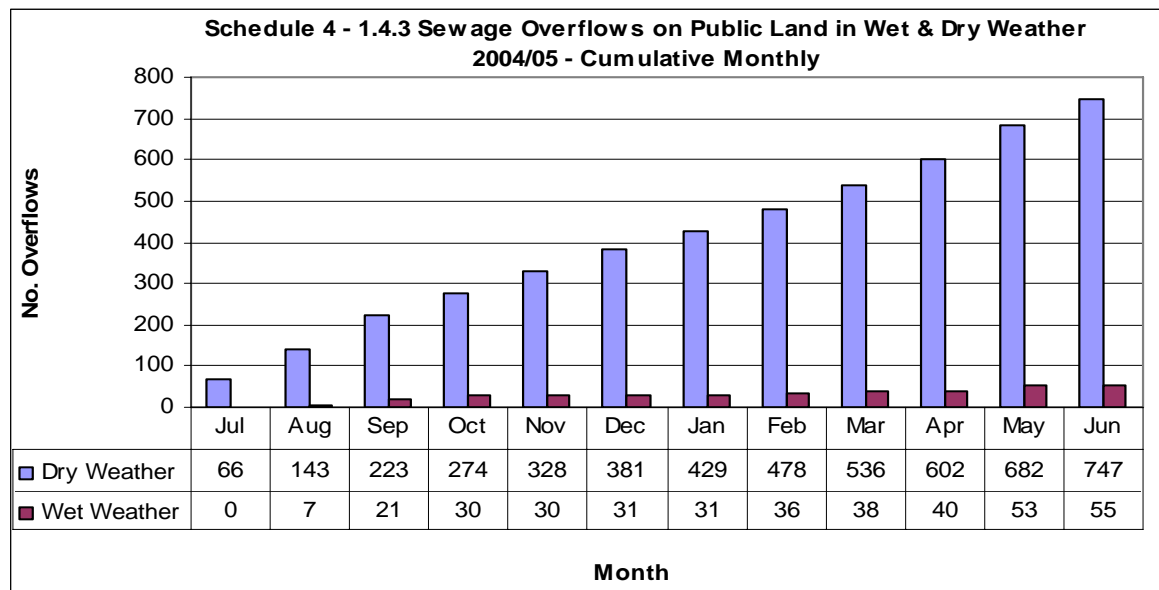
Within our maintenance service agreements there is a requirement to respond to Priority 2 sewer overflows within a 3 hour period where these are called in within normal working hours. Where Priority 2 jobs are reported to Hunter Water outside of normal working hours they are responded to the next working day. Generally a priority 2 job will be a minor sewer overflow which is very localised. They do not have any significant environmental impact nor do they provide significant inconvenience to customers. Given the type of assets from which priority 2 events will occur the overflows are generally of small volume and intermittent in nature.

It is for this reason that there are a number of Priority 2 jobs which show a response time in excess of 3 hours.

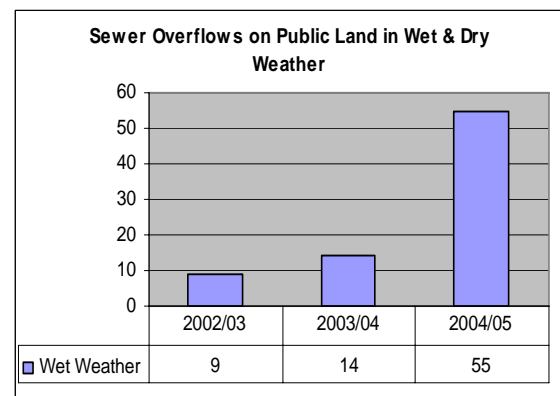
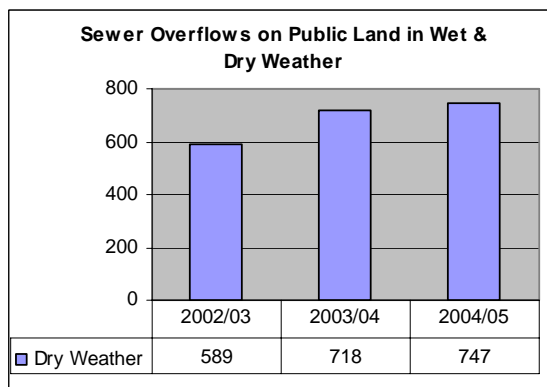
Three Year Trend Data for Priority 1 Sewer Overflows responded to in less than 3 hours or more than 3 hours added by Parsons Brinckerhoff Australia Pty Ltd as follows:



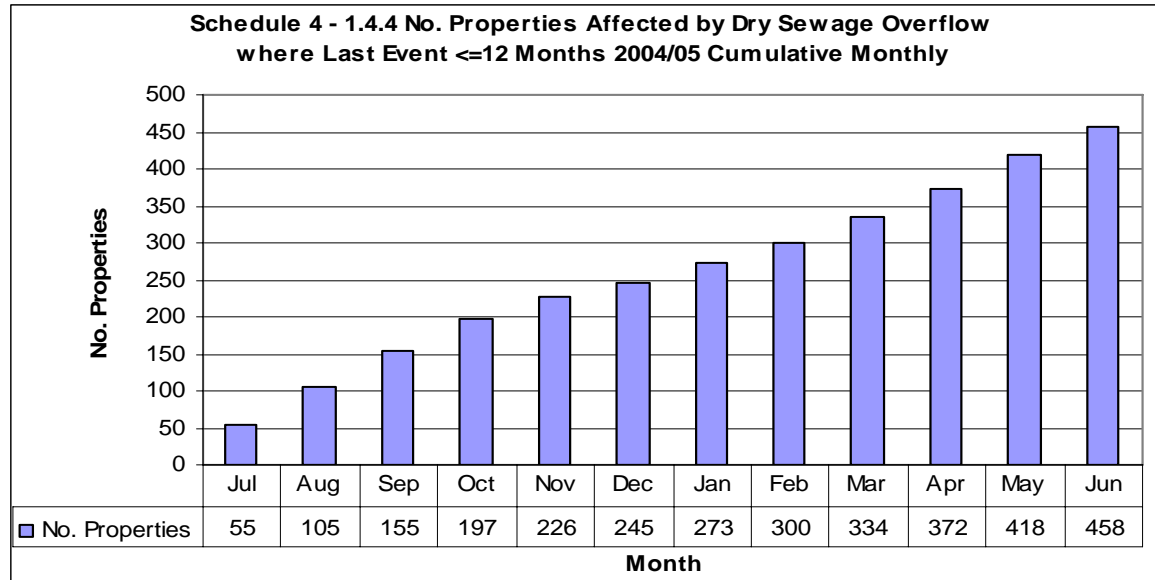
Clause 1.4.3 Number of Uncontrolled sewage overflows on Public land that occurred in dry weather and in wet weather.



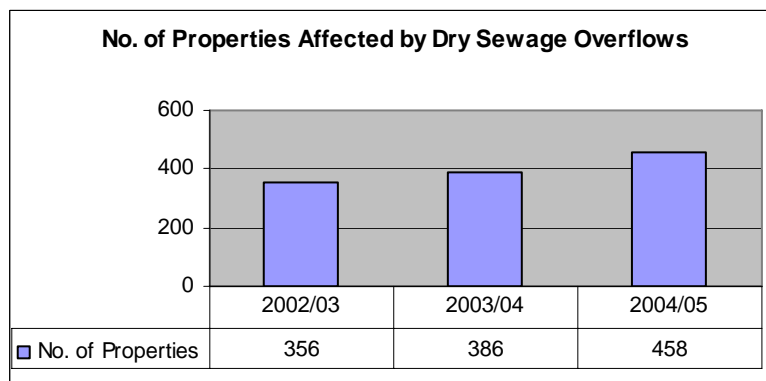
Three Year Trend Data for Sewage Overflows on Public land added by Parsons Brinckerhoff Australia Pty Ltd as follows:



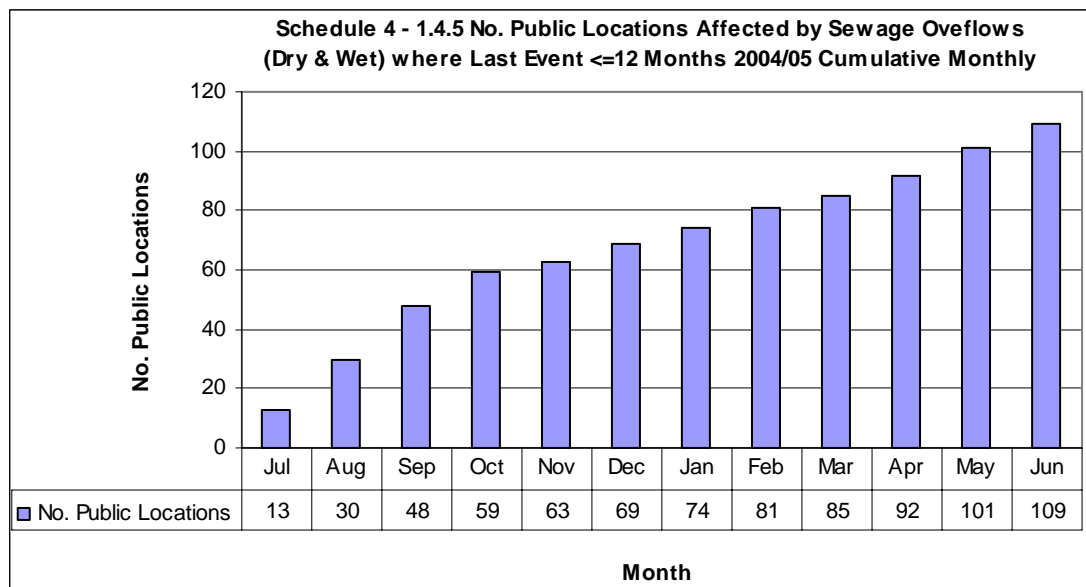
Clause 1.4.4 Number of Properties affected by an Uncontrolled sewage overflow in dry weather where the period since the last Uncontrolled sewage overflow in dry weather on that property is less than 12 months.



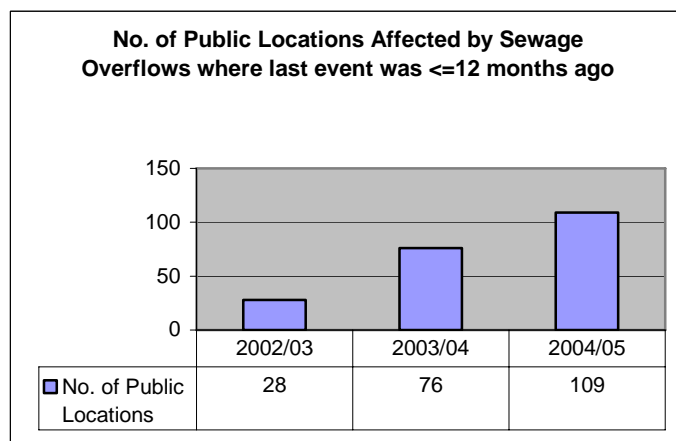
Three Year Trend Data for Number of Properties affected by Dry Sewage Overflow where last event less than 12 months added by Parsons Brinckerhoff Australia Pty Ltd as follows:



Clause 1.4.5 Sewage overflow (whether an Uncontrolled sewage overflow or otherwise and whether occurring in dry weather or wet weather) where the period since the last sewage overflow on that Public land is less than twelve months.



Three Year Trend Data for Number of Public Locations affected by Sewage Overflows where last event was less than 12 months added by Parsons Brinckerhoff Australia Pty Ltd as follows:



Note: Hunter Water advises that the precise overflow locations on Public land necessary for this indicator have only been recorded since 1 July 2002. As expected, the number for 2002/03 is low when compared to later years, where there is a complete 12 month record against which to assess the performance.