

# **Hunter Water Corporation Operational Audit 2006/07**

Report to the Minister

**Water — Compliance Report**  
December 2007



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# 1 Introduction and Overview

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) has completed its audit of Hunter Water Corporation's (Hunter Water) compliance with the requirements of its Operating Licence for the period 1 July 2006 to 30 June 2007. The purpose of this report is to inform the Minister for Water Utilities of the audit findings, and of IPART's recommendations in response to these findings.

The 2006/07 Operational Audit is the final audit of the 2002-2007 Operating Licence. IPART provided the Minister for Water Utilities with recommendations for a new Operating Licence for Hunter Water on 15 May 2007. The new Licence was gazetted on 27 June 2007 and incorporates a risk-based auditing regime.

## 1.1 Overview of Audit Findings

In undertaking its audit review, the auditor examined Hunter Water's compliance with the obligations imposed on it through its Operating Licence, and with the Ministerial Requirements related to these obligations. The auditor also assessed Hunter Water's compliance with its responsibilities for maintaining Memoranda of Understanding with other government agencies, as set out in its Operating Licence.

Overall, the auditor found that Hunter Water had managed its resources to achieve predominately **Full Compliance** with its Operating Licence.

More specifically:

- ▼ Hunter Water achieved **Full Compliance** with the majority of relevant obligations related to customer and consumer rights and its Ministerial Requirement related to this area.
- ▼ Hunter Water achieved mainly **Full Compliance** with its obligations related to water quality. The quality of drinking water supplied by Hunter Water was very high to excellent.
- ▼ System Performance Standard obligations were marked as **Full to High Compliance** and Hunter Water achieved **Full Compliance** with the Ministerial Requirements in this area.
- ▼ Hunter Water has attained **Full Compliance** for making the Integrated Water Resources Plan available and achieving water conservation targets. **Full Compliance** was achieved for relevant clauses relating to water demand and supply indicators.

- ▼ Hunter Water achieved **Full Compliance** with all its obligations related to environmental indicators, environmental plans and **High Compliance** with its catchment management obligations.
- ▼ Hunter Water achieved **High Compliance** with its complaint and dispute handling obligations. While it has an effective complaint handling system in place, the introduction of a new billing system contributed to an increased number of contacts, a higher number of abandoned calls and reduced speed in answering calls.
- ▼ Hunter Water's implementation of its MoU with NSW Health was assessed as **High Compliance**. This represents an improvement on last year. The auditor noted that there was evidence of continued exchange between the two agencies regarding water quality management, monitoring and improvement plans and improvements in Hunter Water's tracking and management of issues.

The auditor included two general comments on the 2006/07 audit:

1. The 2005/06 audit report included many suggestions for improvement. The auditor noted the concerted efforts of Hunter Water in responding to and adopting many of these suggestions.
2. During June 2007, the Hunter area experienced severe floods associated with a 1 in 500 year storm. Hunter Water's emergency management during this event and its subsequent efforts in business continuity and recovery warrant public commendation.

## 1.2 IPART's recommendations

IPART notes that the auditor made a number of primary and secondary recommendations for Hunter Water. It believes that Hunter Water should consider these recommendations and use them to guide its efforts to further improve its compliance performance in future years.

In relation to the primary recommendations, IPART has considered these and has provided comment throughout the body of this report.

IPART recognises the June 2007 flood as a force majeure event in terms of compliance with the Operating Licence. Hunter Water have received written commendations from NSW Health for their actions during the June 2007 floods, having made "a phenomenal effort to ensure safe drinking water to our communities," and contributed to, "averting a potential public health crisis." IPART shares these sentiments and supports the auditor's recommendation.

## Recommendation

That the Minister commends Hunter Water, its staff and contractors for their planning, preparation and response to the June 2007 flood. Their performance demonstrated the highest professional standards, personal commitment and success in maintaining and restoring services to customers and ensuring public health and safety.

## 1.3 Structure of Report

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

Chapter 2 explains the basis for and scope of the audit review, and the process followed in undertaking it. Chapter's 3 to 10 focus on Hunter Water's compliance with the obligations set out within each of the following sections of its Operating Licence:

- ▼ customer and consumer rights
- ▼ water quality
- ▼ system performance
- ▼ water demand and supply
- ▼ environmental indicators and plan
- ▼ catchment management
- ▼ complaint and dispute handling
- ▼ responsibilities for maintaining Memoranda of Understanding with other government agencies.

Please note that the sections marked "Auditor's findings" and "Auditor's recommendations to IPART" in these chapters are closely based on the auditor's final report to IPART. Further detail on the auditor's findings can be found in the auditor's report, which is attached for information.



## 2 | Audit Scope and Process

Hunter Water is a State Owned Corporation, which is wholly owned by the NSW Government. Its roles and responsibilities include providing water and wastewater services to the Newcastle, Lake Macquarie, Maitland, Cessnock and Port Stephens areas, and bulk water services to Dungog, parts of the Singleton and Great Lakes areas and the Central Coast. These roles are derived from the *Hunter Water Act, 1991* (the Act) and the Operating Licence issued to Hunter Water pursuant to Section 12 of the Act.

Part 11 of the Operating Licence stipulates that IPART (or its appointee) is to undertake an Operational Audit of Hunter Water's performance against the requirements of the licence each year, and report its findings to the Minister.

Accordingly, IPART commissioned GHD Pty Ltd to undertake the 2006/07 Operational Audit of Hunter Water covering the period 1 July 2006 to 30 June 2007.

### 2.1 Scope

In line with the scope defined in Part 11 of the Operating Licence, the auditor's review included assessing Hunter Water's:

- ▼ compliance with the obligations in each of Parts 5, 6, 7, 8, 9, 10 and 12 of its Operating Licence
- ▼ implementation of the Memoranda of Understanding it has with NSW Health
- ▼ compliance with any other matter required by the Operating Licence, the Act or administrative direction to be assessed or considered as part of the Annual Audit, and
- ▼ compliance with any requests of the Minister responsible for administering the provisions of the Act, following the 2005/06 Operational Audit (Ministerial Requirements).

In undertaking the audit review, the auditor examined Hunter Water's compliance with its requirements for the 2006/07 audit period only. Requirements satisfied in earlier audit periods were not reassessed.

## 2.2 Process

The auditor adopted a methodology consistent with ISO 14011 Guidelines for Environmental Auditing. These guidelines set out a systematic approach to defining the requirements of the audit, which ensure that it is conducted in accordance with an established and recognised audit protocol.

The auditor held an inception meeting with Hunter Water's Managing Director and other representatives on 18 September 2007. This meeting set out mutual understanding and expectations of the requirements of the audit and protocols for the conduct of the audit. Both Hunter Water and the auditor generally adhered to the agreed protocols throughout the audit. IPART Secretariat was represented at this and most subsequent meetings between the auditor and Hunter Water, which meant that IPART was able to gain first hand information on audit processes and outcomes.

The auditor provided Hunter Water with drafts of the audit report, and gave it an opportunity to provide the auditor and IPART with its comments on these documents. The auditor considered these comments before finalising its report.

The auditor has assessed and rated Hunter Water's compliance with the requirements of the Operating Licence according the following schedule:

**Table 2.1 Hunter Water Compliance Requirements**

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

## 3 Customer and Consumer Rights

### 3.1 Auditor's findings

#### Customer Contract

The majority of Customer Contract requirements under this Licence have been addressed in previous audit periods and were a **No Requirement** in 2006/07. Hunter Water achieved **Full Compliance** with the one remaining clause, through making its Customer Contract publicly available on its website.

#### Consumers

Hunter Water continued to achieve achieved **Full Compliance** with its obligation under the Licence relating to Consumers. When complaints are entered into the computerised system, Hunter Water does not identify whether the complainant is a customer or consumer and thus fulfils its obligations under the Customer Contract (relating to complaint handling, complaint resolution and debt and disconnection procedures), as if those obligations also extended to Consumers.

#### Code of Practice on Debt and Disconnection

The majority of Debt and Disconnection requirements under this Licence have been addressed and were **No Requirement** in 2006/07. Hunter Water achieved **Full Compliance** with the remaining clause, which related to the dissemination of information on the Code to customers.

#### Consultative Forum

The majority of clauses relating to the establishment of the Consultative Forum were satisfied in previous years and were **No Requirement** in 2006/07. Hunter Water achieved **Full to High Compliance** with those requirements that relate to this audit period including: the provision of quality advice relevant to customers and consumers on the Customer Contract and planning and operational issues; dissemination of information relating to the Consultative Forum Charter; and maintenance of the nominated representative groups in the membership of the Forum.

#### Ministerial Requirement 2005/06

Hunter Water has continued to look at options to reduce the number of customers affected by disconnection and flow restrictions measures for non-payment. It introduced a new disconnection Policy in May 2006, commenced to trial a further step in its credit management process in September 2006 and further developed these in 2006/07.

### 3.2 Auditor's recommendations to IPART

- R5.1- Complete an update of its Code of Practice for Debt and Disconnection to reflect the new CIS system, new procedures and new management structures as it relates to customers.

### 3.3 IPART's comments

Performance for this section generally continues the compliance record for customer and consumer rights awarded in the 2006 audit. Many of the Customer and Consumer Rights obligations have been completed in earlier years. Hunter Water achieved Full Compliance with the majority of relevant obligations in this section of the Operating Licence.

In light of the changes to the Customer Information System and Hunter Water's new policies for debt management, IPART supports the auditor's recommendation above.

## 4 | Water Quality

### 4.1 Auditor's findings

#### Drinking Water Quality – Standards

**Full Compliance** was achieved on drinking water quality standards with the Licence requirements.

#### Drinking Water Quality – Monitoring

**Full Compliance** was achieved with this requirement of the Licence. The auditor notes that the current practices in regard to reliance on NATA accreditation as the only form of Quality Assurance and Quality Control are a minimum. These provisions cover specific activities within the monitoring program but do not address the issues of Quality Assurance and Control of the monitoring program as whole. Consideration should be given to including specific Quality Assurance and Quality Control components of the monitoring program as whole.

#### Drinking Water Quality – Reporting

**Full Compliance** level was achieved with this requirement of the Licence. In keeping with the audit observation on Drinking Water Quality – Monitoring, consideration should be given to including reporting of quality assurance data as part of this report.

#### Drinking Water Quality – Planning

**Full Compliance** was achieved with this requirement of the Licence. There was a lack of evidence to confirm that the Department of Health had reviewed and agreed with the Water Quality Improvement Plan and the Incident Management Handbook.

#### Other Grades of Water

**Full Compliance** was achieved with this requirement of the Licence.

#### Environmental Water Quality

**Full Compliance** was achieved with this requirement of the Licence.

Hunter Water supplied drinking water of an excellent quality to its customers during the 2006/07 audit period. However, there are some areas of compliance, within the provisions of the Operating Licence, which can be improved. It is noted that Hunter Water have endeavoured to implement a more formal approval/agreement process with NSW Health although, despite these efforts, evidence of a final sign off is still rather informal. NSW Health should be encouraged to be more timely and formal in its acknowledgement of approval of the documentation submitted by Hunter Water.

## 4.2 Auditor's recommendations to IPART

- R6.1 - Develop a Quality Assurance (QA) section for the Water Quality Monitoring Plan, which should also include provisions for the reporting of QA performance;
- R6.2 – Endeavour to ensure that approval of NSW Health is received in regard to Monitoring Plans before they are implemented.

## 4.3 IPART's comments

Overall, supply of drinking water was very high to excellent with mainly Full Compliance for this section. This compliance grade improves on the High Compliance grade awarded to Hunter Water last year. The auditor notes that many of the areas of improvement that were identified in the 2006 report have been addressed.

Hunter Water achieved Full Compliance in relation to water quality standards. For monitoring and reporting of water quality, Hunter Water achieved High to Full Compliance.

IPART concurs generally with the auditor's findings in relation to Water Quality, as they apply to the overall system. However, IPART considers that it is important to highlight an incident that occurred on one day during the year.

In December 2006, Hunter Water overdosed fluoride in its Anna Bay system over an 11 hour period. As noted by the auditor and NSW Health, such an overdose represents a non-compliance of the *Fluoridation of Public Water Supplies Regulation 2002*<sup>1</sup>. Compliance with this Regulation is the responsibility of the NSW Minister for Health and NSW Health. The auditors note that once Hunter Water became aware of the incident, it initiated its Incident Management Plan, advised NSW Health and instituted remediation action to address the cause of the overdose. IPART particularly notes that NSW Health did not consider there to be any risk to public safety.

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<sup>1</sup> *Fluoridation of Public Water Supplies Regulation 2002*, clause 6.

IPART noted that Hunter Water's systems permitted the overdosing for a period of 11 hours. The incident demonstrates that Hunter Water's incident management systems were sufficiently robust to identify a problem permitting Hunter Water to detect and rectify the overdose.

The auditor's recommendations set out in section 4.2 above, represent good practice water quality management and are supported by IPART.



## 5 System performance

### 5.1 Auditor's findings

#### Interpretation

Hunter Water achieved **Full Compliance** with its implementation of the definitions and interpretations in the licence.

#### System Performance Standards

Hunter Water achieved **High Compliance** with the requirement that no more than 14,000 properties in a financial year should 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. Hunter Water reported 15,392 properties that experienced one or more water interruptions. While this figure is a significant increase from 2005/06 (13,133 properties), this result was impacted by the force-majeure event of the June storm. Hunter Water reported that exclusion of the June storm event reduces the affected property count to only 9,835 properties. There was a significant reduction in customer service interruptions caused by planned outages due to the successful implementation of interruption minimisation strategies. Hunter Water's performance in the emergency management of the June 2007 storm event and the consequent business continuity and recovery efforts leads the auditor to recommend that the Minister consider officially commending Hunter Water, its staff and contractors for their performance.

Hunter Water achieved **Full Compliance** with the requirement that no more than 4,800 properties in a financial year should experience one or more pressure incidents i.e. an event where the water pressure to a property falls below 20 metres head. Hunter Water reported 1,655 properties experiencing one or more water pressure incidents. This figure is similar to the result reported for 2004/05 and 2005/06.

Hunter Water achieved **Full Compliance** with the requirement that the number of uncontrolled sewage overflows (other than on public land) in a financial year should not exceed 6,500. In 2006/07 there were 4,158 uncontrolled sewage overflows onto private property. While this is within the required standard, it is a continuation of the deteriorating trend of the last five years and it is recommended that Hunter Water take action to reverse this trend.

### Reporting on System Performance Standards

Hunter Water achieved **Full Compliance** for reporting on system performance. Hunter Water obtained **High Compliance** for making system performance reports publicly available. It is recommended that Hunter Water upgrade availability of its year-end reporting against its system performance standards.

### System Performance Indicators

Hunter Water achieved **Full Compliance** for reporting on system performance indicators.

### Keep records on Water interruptions, low pressure and Sewage overflows.

Hunter Water achieved **Full Compliance** for maintaining records of its system performance standard and indicator performance.

### Report on low pressure areas

There was **No Requirement** for reporting on low pressure areas.

### Ministerial requirements

Hunter Water achieved **Full Compliance** for meeting Ministerial Requirements.

## 5.2 Auditor's recommendations to IPART

- R7.1 - Consider publicly commending/acknowledging Hunter Water, its staff and contractors for their planning, preparation and response to the June 2007 flood. Their performance demonstrated the highest professional standards, personal commitment and success in maintaining and restoring services to customers and ensuring public health and safety.

## 5.3 IPART's comments

System Performance Standard requirements were marked as Full to High Compliance. The June 2007 storm was a significant test for Hunter Water and this experience will be used to further improve their system. As a result of the June storm event, Hunter Water exceeded the water continuity standard. Recognising the "force majeure" nature of this event and the fact that the standard was comfortably met if the effect of the storm was excluded, the auditor awarded a High Compliance for this standard. This year's audit reported continuous improvement in a number of system performance areas. Hunter Water has instituted an interruption minimisation strategy.

Hunter Water has received praise from NSW Health for their efforts to restore water and sewerage services and customer communications. IPART concurs with Recommendation R7.1, above (see page 3). It is IPART's understanding that Hunter Water were proactive, anticipating the storm event and having every possible contingency measure in place before the storm struck. At one point, the flooding was so severe that Hunter Water staff were confined to their offices overnight.

While the sewer overflow standard was easily met, the auditor commented on the need for improvement to reverse a continuing adverse trend. The incidence of sewerage overflows has doubled since 2000/01. Longer term trends indicate a strong link between sewerage overflows and climatic conditions.



## 6 | Water supply and demand

### 6.1 Auditor's findings

#### Integrated Water Resources Plan

Hunter Water's Integrated Water Resources Plan (IWRP) was completed in a previous audit period and thus **No Requirement** applies to many of the clauses in 2006-2007. Hunter Water was assigned **Full Compliance** for making the IWRP available. Future IWRPs will consider issues such as climate change and drought security, supply augmentation and opportunities for further recycling and demand management.

#### Water Conservation Target

**Full Compliance** was assessed for achieving water conservation targets.

The actual annual demand of 206 kL/year/residential property is less than the Water Conservation Target of 215 kL/year/residential property. Based on the accuracy of water measurement of about  $\pm 2.7$  per cent, the actual demand could be in the range 200 to 212 kL/year/residential property.

Emergency supply from Hunter Water to the Central Coast can occur subject to Hunter Water storage levels. That is, the supply agreement is based on ensuring supply to the Central Coast does not jeopardize reliability of supply to Hunter Water customers. A staged reduction of supply has been adopted based on Hunter Water storage levels. Supply to the Central Coast is treated as non-residential supply (ie, Major customer supply) and, as such, is excluded from Hunter Water's domestic water consumption target calculations. Given the Central Coast will have water restrictions whilst storage levels are low (and therefore receiving emergency supply from the Hunter), conservative use of Hunter Water's supply is assured. It is considered appropriate that this supply be excluded from Hunter Water's consumption target calculations.

### Water Demand & Supply Indicators

As no water restrictions applied over 2006/07, a number of clauses were **No Requirement**, while **Full Compliance** was assigned for reporting on requirements relating to losses from the water system, Recycled Water use, Demand Management and water demand and supply indicators.

Hunter Water provided information on the relevant indicators of water demand and supply indicators; performance was generally good. Previous audit concerns, regarding uptake of recycled water by industry and translating water audits of industry into actual water savings, have been addressed through a detailed Recycled Water Study. This Study has identified tangible projects to form part of the 2008 IWRP major review. The proposed implementation will be reviewed once all possible programs are identified through the IWRP review process.

In addition to recycled water measures being considered by Hunter Water, *TogetherTODAY* is another initiative where Hunter Water is involved in partnership with industry to reduce potable water consumption.

Hunter Water already recycles a considerable volume of wastewater through industry, but the volume is subject to fluctuations in economic and industrial conditions beyond Hunter Water's control. The approach for targets to be set to increase recycling and decrease use of potable water within the utility's sewage treatment plants, as recommended in the 2006 Issues Paper Review of the Operating Licence, is supported. This approach has the advantage of being well within Hunter Water's control. Provision of some form of indicators of reuse rather than fixed targets in the new 2007 – 2012 Licence is consistent with this approach.

The drop off in the number of REFIT kits installed by Hunter Water over 2005/06 and 2006/07 is understood to be due to private sector competitors offering alternate kits at 'no cost' and/or lower prices. While Hunter Water will continue the REFIT program with 2,500 Department of Housing properties targeted for retrofit in 2007/08, it is recommended that details of kits installed by other providers be reported through partnership arrangements being discussed in the *TogetherTODAY* and/or other programs.

It is recommended that Hunter Water also report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future IWRP reports.

### Annual Reporting on Water Demand & Supply Indicators

**Full Compliance** was assessed for annual reporting on water demand and supply indicators.

The annually produced Integrated Water Resource Plan (August 2007) provides a good summary of Hunter Water's performance on Water and Demand indicators. The report was delivered to IPART on time.

### Ministerial Requirement

Hunter Water achieved **Full compliance** in meeting its Ministerial Requirement for developing a summary table of water saving initiatives.

## 6.2 Auditor's recommendations to IPART

- R8.1 - Set the target for recycled water based on a more detailed analysis of potential savings and tangible projects; the information can then inform the setting of an appropriate potable substitution target.
- R8.2 - Report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future IWRP reports.

## 6.3 IPART's comments

Demand Management features are strongly supported by IPART. Hunter Water has attained Full Compliance in achieving water conservation targets.

The auditors specifically commented on a range of water conservation initiatives including leak detection/reduction programs, Indoor/Outdoor metering project, and a pressure management project.

There were no water restrictions in 2006/07 and so a number of clauses were marked as No Requirement. Full Compliance was achieved for clauses relating to water supply and demand indicators and related reporting.

IPART supports the auditor's recommendation in section 6.2 above and intends to monitor Hunter Water's progress in these areas.



## 7 | Environment – Indicators and Plans

### 7.1 Auditor's findings

#### The Environmental Management Plan

Compliance with the majority of clauses with respect to the '*development*' of an Environmental Management Plan (EMP) was achieved in the 2002/03 audit period and in the 2004–2007 Strategic Business Plan. Thus '**No Requirement**' was recorded for performance against the majority of clauses. Consequently, performance related primarily to monitoring activities over 2006/07, for which **Full Compliance** was assessed.

Hunter Water has made no material or other amendments to the EMP during the current reporting period.

The current EMP is available on the Hunter Water website as well as in public libraries within the service area. In addition, customers may obtain a hard copy of the EMP directly from Hunter Water's customer service centres.

#### Environmental and ESD Indicators

Similarly, compliance with the requirements of the majority of clauses relating to environmental and ESD indicators was achieved in the 2002/03 audit period and there was '**No Requirement**' within the current audit period.

Hunter Water has achieved **Full Compliance** against clauses that relate to monitoring, compiling data and reporting performance against the environmental and ESD indicators for 2006/07.

#### Energy Management

Hunter Water has achieved **Full Compliance** against clauses that relate to energy management.

The audit notes that Hunter Water has exceeded its requirement to develop Energy Savings Action Plans and has instigated a range of energy savings initiatives.

## 7.2 Auditor's recommendations to IPART

The auditor made no recommendations in relation to this area.

## 7.3 IPART's comments

Many of the Environmental aspects were completed in earlier years. Hunter Water attained Full Compliance for obligations falling due this year.

Hunter Water has developed Energy Savings Action Plans for a number of its largest customers, and has commenced installation of a mini hydroelectric scheme in its Wyong System.

## 8 | Catchment Management

### 8.1 Auditor's findings

Hunter Water has achieved **High Compliance** for activities under Part 10 of the Operating Licence relating to Catchment Management.

#### Catchment Report

The Catchment Report 2006/07 provides information on the comprehensive catchment management activities undertaken by Hunter Water and as required (under Clause 10.1.1) and including:

- Bulk water quality;
- Activities undertaken in accordance with Hunter Water (Special Areas) Regulation, 2003, the Williams River Catchment Regional Environmental Plan, the Williams River Regional Planning Strategy (1997) and the Seaham Weir Operations Plan;
- Performance against its Water Management Licence and the condition of its dams, ponds and detention basins under the Dam Safety Act 1978;
- Additional water or land management activities undertaken within the catchment; and
- Five-year trends observed in the Williams River against specified water quality parameters and other routinely tested water quality parameters.

Importantly, the combined effectiveness of these activities is being reflected in continued good water quality. However, a number of opportunities for improvement have been identified. Firstly, to enhance the format of the Catchment Report, so that achievement and outcomes delivered during the Operational year are clearly enunciated. Secondly, the ability to set and monitor catchment health targets more directly linked to the broader environmental indicators program. Thirdly, the report contained a number of data errors relating to the Williams River flow and Balickera pumping rates which are now being corrected and the 2007 Catchment Report will be reissued.

#### Public Display of the Catchment Report

The Catchment Report is available on the Hunter Water website. In addition, customers may obtain a hard copy of the Report directly from Hunter Water's customer service centres.

## 8.2 Auditor's recommendations to IPART

- R10.1 - Highlight, or summarise, its achievement in catchment management in the nominated year, as compared to cumulative actions, within the relevant sections of its Annual Catchment report to assist the readers.
- R10.2 - Develop a catchment management framework of objectives, budgets, targets and performance reporting to guide its activities, and to the extent possible coordinate this with its Environmental Indicator report requirements.
- R10.3 - Establish with DWE arrangements for the more timely provision of data from the Hunter Integrated Telemetry System and review its own the data verification systems of its remote telemetry (SCADA) data system.

## 8.3 IPART's comments

While the overall compliance for this area of the Operating Licence was assessed as High Compliance, compliance for individual clauses ranged from moderate to full compliance. This performance should be compared with an overall assessment of full compliance for this section in the 2005/06 audit.

IPART believes that drinking water quality is strongly related to the health of the catchments. IPART notes the continuing supply of high quality water, reflecting effective catchment activities and acknowledges Hunter Water is one of several land managers and bodies that manage Hunter Water Catchments.

IPART is of the view that Hunter Water's contribution to activities in its catchments is significant. It therefore supports efforts to improve performance in this area. The auditor commented that Hunter Water needs to improve the setting and monitoring of targets for catchment management activities and the accuracy of some of the data presented in the Catchment Report. The Auditor also felt that the Catchment Report could benefit by a new format.

IPART notes that the matters contained in the auditor's recommendations R 10.1 and R 10.2 were considered during the development of the new Operating Licence and were addressed in the new licence. IPART urges Hunter Water to progress the matter set out in recommendation R 10.3.

## 9 Complaints and Disputes

### 9.1 Auditor's findings

#### Effectiveness of Complaints and Dispute Handling Procedures

Hunter Water operates an effective complaints handling process and has achieved **High Compliance** with this part of the Licence. Its systems are designed to comply with the Customer Contract Australian Standard and to measure, monitor 'effectiveness' and regularly report to senior management and its customers on performance.

An independent survey during 2007, determined that the overall level of customer satisfaction was reduced (from 77 per cent in 2005 to 75 per cent in 2006/07) compared to the 80 per cent required by the Key Performance Indicator targets.

The introduction of a new billing system (Customer Information System, CIS) contributed to higher complaint levels and saw a first half year decline in a number of performance parameters, such as higher rates of abandoned calls and longer times to answer calls.

Overall, the total number of complaints fell by some 9 per cent, and good improvements in a number of areas (for example, reduced operational complaints) were masked by a higher number of complaints following the introduction of a new Billing system.

#### Complaints to Other Bodies

Hunter Water advised that there have been no complaints to a Court or Tribunal during this audit period.

### 9.2 Auditor's recommendations to IPART

- R11.1 - Investigate and report to the Consultative Forum on the efficiencies that the new Customer Service Information system has delivered since its introduction, including recommendations to improve the speed of answering and abandoned calls, and the future role of the CIS.

### 9.3 IPART's comments

Hunter Water's has maintained High Compliance awarded in the 2006 audit for this area of the Operating Licence.

The implementation of a new Customer Information System and Billing System resulted in an increase in complaints in some categories, however the numbers of complaints in other categories (eg, field operations) has decreased (the increase in abandoned calls due to the June storm event has been discounted in this analysis). IPART notes that the 2005/06 Audit mentioned that abandoned calls rate was high.

IPART considers that telephone response is the primary customer gateway to Hunter Water and therefore considers this an important issue. IPART recommends that Hunter Water increase its efforts to reduce abandoned calls and delays in answering calls. IPART supports recommendation R11.1.

## 10 Responsibilities for Maintaining MOUs

### 10.1 Auditor's findings

The implementation of Hunter Water's requirements, which primarily relates to the MOU with the NSW Department of Health, referred to in Clause 3.3 is considered to be **High** and to have improved over the year. Whilst Clause 3.3 also refers to MOUs with the EPA and DLWC, the Licence does not require Hunter Water to maintain these MOUs.

#### MOU – NSW Department of Health ('NSW Health')

Hunter Water is in the final years of its current MOU with NSW Health and continued to build on its '*cooperative relationship*' at an operational level. The role of the MOU is to "...*discuss broad principles, directions and policies...*" and to do so "...*considering long term strategic issues...*" and to "...*annually review progress*". Recommendations were made in the 2005/06 audit to enhance this strategic role and evidence was provided of Hunter Water's efforts, through increased tracking and management of strategic issues. There was evidence of the continued exchange of water quality management, monitoring and improvement plans between NSW Health and Hunter Water.

#### MOU – Environmental Protection Authority (EPA)

Hunter Water's MOU with the Environmental Protection Authority (now part of the Department of Environment and Climate Change, DECC) expired in 2005 and, by agreement between the agencies, was not renewed. Hunter Water indicated that there is '*operational*' correspondence and a strategic relationship between the DECC and Hunter Water and this was confirmed through viewing "*Liaison Meeting*" agendas and minutes (18 September 2006 and 13 March 2007). Formalisation of the roles, responsibilities, composition and frequencies of the "*Liaison Meetings*" has been recommended.

#### MOU – Department of Land and Water Conservation (DLWC)

Hunter Water's MOU with the Department of Land and Water Conservation (now the Department of Water and Energy, DWE) has expired and, by agreement, was not renewed. Hunter Water operated a *Strategic Liaison Committee* with DWE that met twice in the year. It is recommended that the foundation of this Committee be formalised with DWE.

## 10.2 Auditor's recommendations to IPART

The auditor made no recommendations in relation to this area.

## 10.3 IPART's comments

Compliance with regard to maintaining an MoU with NSW Health shows an improvement over the moderate grade assessed in 2006. IPART notes the auditors comment that many of the suggestions for improvement suggested in the 2006 audit report have been implemented.



## Appendices



## A | GHD audit report to IPART





INDEPENDENT PRICING AND REGULATORY TRIBUNAL  
OF NEW SOUTH WALES

# HUNTER WATER CORPORATION OPERATIONAL AUDIT 2006/2007



December 2007



CLIENTS | PEOPLE | PERFORMANCE

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## Abbreviations

Acronym	Description
ADWG (1996)	Australian Drinking Water Guidelines (1996), National Health and Medical Research Council and Agriculture and Resource Management Council
ADWG (2004)	Australian Drinking Water Guidelines (2004), National Health and Medical Research Council and Agriculture and Resource Management Council
Act	<i>Hunter Water Act, 1991.</i>
AOMS	Assets and Operations Maintenance System
AS	Australian Standard
CCTV	Closed Circuit Television
CIS	Customer Information System
CMS	Complaints Management System
CSIRO	Commonwealth Scientific and Research Organisation
DA	Development Application
DBT	Di Butyl Tin
DECC	Department of Environment and Climate Change
DEUS	Department of Energy, Utilities and Sustainability
DLWC	Former Department of Land and Water Conservation (NSW) – now DWE
DIPNR	Former Department of Infrastructure, Planning and Natural Resources (NSW)
DWE	Department of Water and Energy
EMP	Environmental Management Plan
EPA	Environment Protection Authority (NSW) – Now part of the DECC
ESD	Ecologically Sustainable Development
EWON	Energy and Water Ombudsman NSW
GEMP	Government Energy Management Plan
GHD	GHD Pty Ltd
GIS	Geographical Information Systems
GL	Gigalitre
Hunter Water	Hunter Water Corporation
HWC	Hunter Water Corporation
IPART	Independent Pricing and Regulatory Tribunal (NSW)
ISO	International Standards Organisation
IT	Information Technology
IWRP	Integrated Water Resources Plan

<b>Acronym</b>	<b>Description</b>
kL	Kilolitre
km	Kilometre
ML	Megalitre (1 million litres)
MOU	Memorandum of Understanding
MNF	Minimum Night Flows
M&R	Monitoring and Reporting
NATA	National Analytical Testing Authority
NSW Health	NSW Department of Health
pa	Per annum
PAC	Powdered Activated Carbon
pH	A measure of the acidity of a solution in terms of activity of hydrogen
QA	Quality Assurance
RAAF	Royal Australian Air Force
SCADA	Supervisory Control and Data Acquisition
SEDA	Sustainable Energy Development Authority
SLC	Strategic Liaison Committee
TBT	Tri Butyl Tin
WML	Water Management Licence
WRAPP	Waste Reduction and Purchasing Policy
WSAA	Water Services Association of Australia
WTP	Water Treatment Plant

# Glossary/Definitions

## GENERAL TERMS AND DEFINITIONS

Term	Meaning
<b>Act</b>	<i>Hunter Water Act, 1991.</i>
<b>Area of Operations</b>	As specified in section 16 of the Act and described in Schedule 1 of the Operating Licence.
<b>Audit period</b>	1 July 2006 to 30 June 2007.
<b>Auditor</b>	GHD Pty Ltd
<b>Commencement Date of Operating Licence</b>	1 July 2002
<b>End of Term Review</b>	A review of the Operating Licence to be commenced on or about 1 January 2006.
<b>Function</b>	Means a power, authority or duty.
<b>Minister</b>	The Minister responsible for administering the provisions of the <i>Hunter Water Act, 1991</i> .
<b>Operating Licence</b>	The Licence between 1 July 2002 and 30 June 2007.
<b>Water Management Licence</b>	A Water Management Licence granted under the <i>Water Act, 1912</i> and issued by DLWC in 1998 for 20 years and amended on 25 June 2004.

## COMPLIANCE TABLE ASSESSMENT

Term	Meaning
<b>Grading of compliance</b>	The following ratings are used to grade achievement of compliance with a Licence condition.
<b>Full compliance</b>	All requirements of the condition have been met.
<b>High compliance</b>	Most requirements of the condition have been met with some minor technical failures or breaches.
<b>Moderate compliance</b>	The major requirements of the condition have been met. ( <i>Formerly referred to as "Partial" compliance</i> )
<b>Low compliance</b>	Key requirements of the condition have not been met but minor achievements regarding compliance have been demonstrated.
<b>Non compliance</b>	The requirements of the condition have not been met.
<b>Insufficient information</b>	Relevant, suitable or adequate information to make an objective determination regarding compliance was not available to the auditor.
<b>No requirement</b>	The requirement to comply with this condition does not occur within the audit period or there is no requirement for Hunter Water to meet, such as a definition or a requirement placed upon another agency.

## Preface

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

Hunter Water is a State Owned Corporation, which is wholly owned by the NSW Government. The roles and responsibilities of Hunter Water derive from the *Hunter Water Act, 1991* (the Act) and the Operating Licence issued pursuant to Section 12. The Operating Licence enables Hunter Water to provide water and wastewater services to almost half-a-million people residing in the Newcastle, Lake Macquarie, Maitland, Cessnock and Port Stephens areas.

The scope of the audit is defined in Part 11 of the Operating Licence. The scope includes assessment of compliance against the Ministerial requirements as presented by the Minister responsible for administering the provisions of the *Hunter Water Act, 1991*, following the 2005/06 Operational Audit.

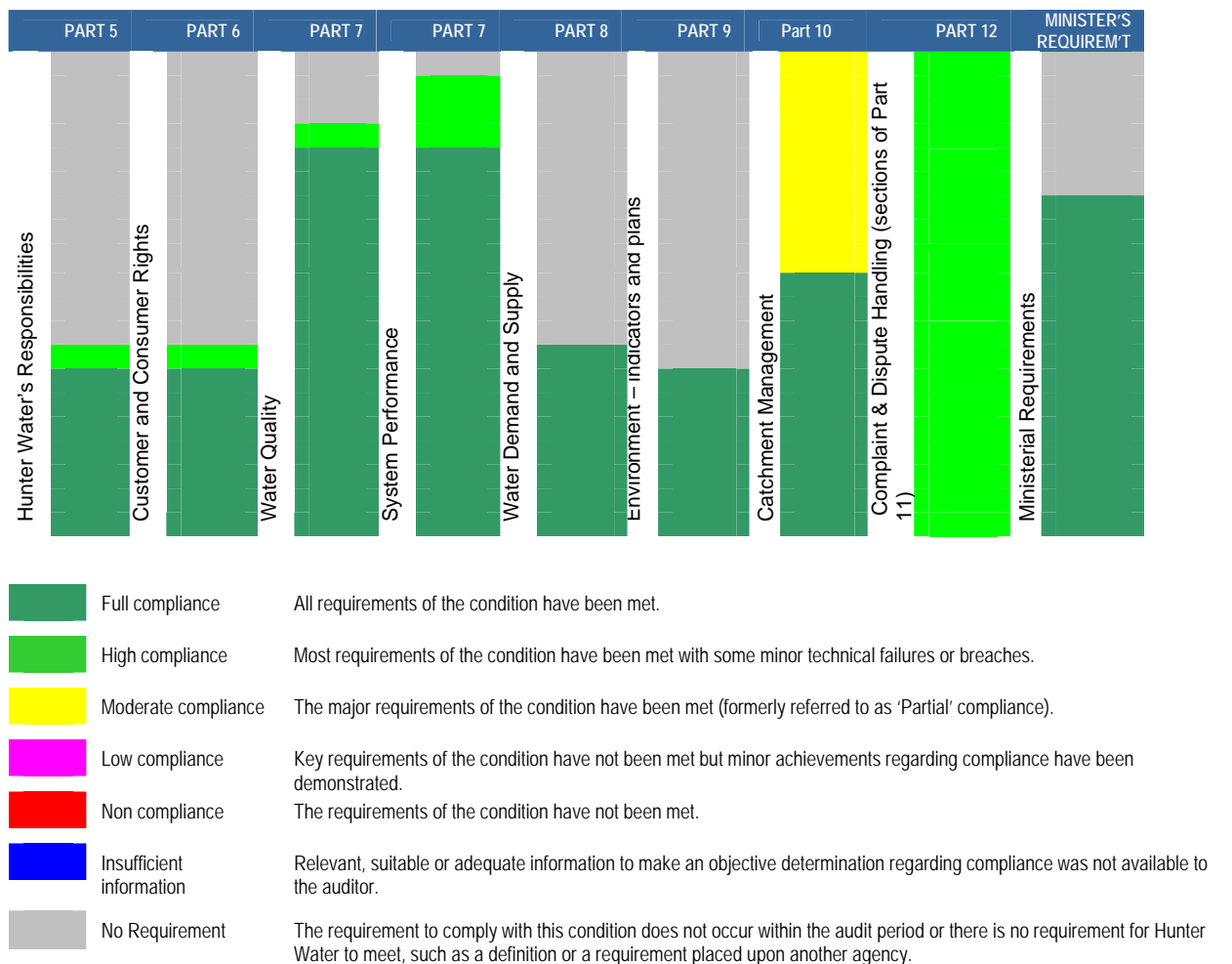
The findings of the report are presented in a format consistent with the Operating Licence structure and not in a '*prioritised order*' or '*order of significance*'. The report also identifies factors that have affected compliance and presents recommendations to improve compliance in subsequent years.

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

# Executive Summary

Figure 0-1 provides an overview of Hunter Water's level of compliance.

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



NOTE: Figure is indicative only.

Compliance with each part of the Operating Licence for the 2006/07 Audit period is summarised below.

### **Licence Part 3 – Hunter Water’s Responsibilities**

Hunter Water is required to maintain a MOU with NSW Health for the purpose of forming a “*cooperative relationship*”. Recommendations were made in the 2005/06 audit to enhance the strategic role of this relationship and evidence was provided of Hunter Water’s efforts, through increased tracking and management of issues. Compliance with the Clause has improved over the audit period and overall was considered to be **High compliance**.

### **Licence Part 5 - Customer and Consumer Rights**

Overall **Full compliance** was assessed with the requirements related to debt and disconnection for non-payment, availability of the Customer Contract, complaint handling and resolution, dissemination of the Code of Practice and the operation of the Consultative Forum.

A number of requirements relating to Customer and Consumer Rights had **No requirement** during 2006/7, having been completed prior to the audit period.

### **Licence Part 6 - Water Quality**

Hunter Water continued to supply excellent quality drinking water to its customers, which is reflected in the **Full compliance** with all water quality standards. Hunter Water also achieved **Full compliance** with all requirements for monitoring and reporting drinking water quality.

**Full compliance** with the requirements for supplying other grades of water and for quality requirements of other discharges was achieved.

### **Licence Part 7 - System Performance**

**Full compliance** was assessed for Hunter Water meeting its System Performance Standards in relation to Water Pressure and Sewage Overflows, and **High compliance** in relation to Water continuity.

Hunter Water received **Full compliance** for maintaining records and preparing reports on its performance against these Standards, **Full compliance** for reporting on System Performance indicators, and a **High compliance** for making the reports freely available to the public.

Hunter Water achieved **Full compliance** for reporting on low pressure areas.

### **Licence Part 8 - Water Demand and Supply**

Hunter Water achieved **Full compliance** with the requirements relating to making the Integrated Water Resources Plan available to the public.

**Full compliance** was achieved with requirements for meeting and reporting on the Water Conservation Target.

As no water restrictions applied over 2006/07, a number of clauses were **No requirement**, however **Full compliance** was achieved for requirements relating to losses from the water system, Recycled Water use and Demand Management and water demand and supply indicators.

#### **Licence Part 9 - Environment – Indicators and Plans**

Hunter Water achieved **Full compliance** for clauses relating to the Environmental Management Plan, Environmental Indicators and Energy Management. Compliance with the majority of clauses of Part 9 has been achieved in previous years, therefore **No requirement** was recorded against these.

#### **Licence Part 10 - Catchment Management**

Hunter Water achieved **High compliance** for its activities relating to Catchment Management. Although Hunter Water provides information on its comprehensive catchment management activities in the Catchment Report, a number of opportunities exist to enhance the format of the report, to set and monitor catchment health targets and to improve the accuracy of data presented in the report.

#### **Licence Part 12 - Complaint and Dispute Handling**

Hunter Water achieved **High compliance** in relation to requirements for Complaint and Dispute Handling. There is an effective system in place for the handling of complaints. However, complaints relating to the introduction of a new billing system masked the improvement in other areas (for example, a 40% reduction in the number of '*Operational Maintenance*' complaints). Whilst Hunter Water was successful in recording an overall decline (9%) in the total number of complaints, a higher number of abandoned calls and a reduced speed in answering calls were recorded over 2006/07.

#### **Ministerial Requirements**

Following the findings and recommendations of the 2005/06 Operational Audit, two Ministerial Requirements were issued to Hunter Water.

- Endorsement of IPARTs recommendation that Hunter Water develop a summary table for water saving initiatives. For 2006/07 this was to identify expenditure and savings achieved for the year and the key reasons for performance.

Hunter Water achieved **Full compliance** for this requirement.

- Endorsement of auditor recommendations that Hunter Water:
  1. Ensure improved accessibility to required system performance information in its new website; and
  2. Train its customer service staff to improve awareness of the availability of system performance information.

Both of the auditor recommendations were to be achieved by August 2007.

Hunter Water achieved **Full compliance** for this requirement.

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

# ‘The Big Picture’

The 2006/07 Operational Audit of Hunter Water Corporation has identified performance against the following key issues as ‘*The Big Picture*’ items for noting or action.

## In brief

- ▶ A primary function of Hunter Water is the provision of water to the residents and businesses of the Hunter Region. Over 2006/07, the supply of drinking water continued to be of a very high to excellent standard. Permanent additional treatment for water from Chichester Dam has restored taste and odour quality following a Geosmin incident in 2006.
- ▶ As part of a “*continuous improvement*” approach, further opportunities are available for Hunter Water in gaining formalisation of NSW Health’s approval and agreements, on water quality, and enhancing Quality Assurance and Control verification.
- ▶ Hunter Water continued to meet the System Performance Standards. It had instituted an interruption minimisation strategy, which would have resulted in less than 10,000 properties being impacted, against the target of less than 14,000. However, the June 2007 storm, estimated to be well in excess of a 1:100 year event, resulted in some 15,392 properties experiencing water interruption of 5 hours or more for the 12 months. Yet Hunters Water’s staff efforts to restore water and sewerage services and the communication within impacted customers over the storm event is well deserving of praise.
- ▶ Hunter Water has an increasing trend in sewerage overflows which have doubled since 2000/01, after making adjustments for the June storm event.
- ▶ Whilst many of the requirements on Hunter Water for an Integrated Water Resources Plan were completed in earlier audit periods, future Plans will need to consider emerging issues such as climate change, drought security, enhanced demand management and recycling opportunities. Hunter Water has met its water conservation target of 215kL/year/residential property (206kL/year/residential property).
- ▶ Hunter Water has played a key role in providing emergency water supplies to the Central Coast, although these are excluded (being classified as *Major Customer supplies*) from water consumption targets.
- ▶ No water restrictions applied over 2006/07. Hunter Water undertook planning to improve water recycling programs and reducing potable water consumption, although the actual savings should increase in following years. Hunter Water’s direct recycled water usage dropped in 2006/07 and total re-use continues to be below the target of 13% of wastewater volume.
- ▶ The majority of Hunter Water’s obligations under Customer and Consumer Rights were completed in earlier years. Opportunities for improvement relate to the full integration of the Code of Practice for Debt and Disconnection and Customer Contract categories into the new Customer Information System, CIS. Examining and sharing the ‘*lessons learnt*’ through the introduction of the CIS within Hunter Water and its Consultative Forum are recommended.
- ▶ Requirements for developing Environmental Management and Strategic Business Plans were met in earlier years and Hunter Water’s obligation in 2006/07 were to “report” on its Environmental and ESD indicators and Energy Management which it did satisfactorily.

- ▶ Hunter Water is just one of the land and water managers whose activities impact the health of its catchments. Importantly, the effectiveness of these activities was reflected in a continuing supply of good water quality. A more detailed review of Hunter Water's Catchment Report for 2007 identified a number of opportunities for improvement, including:

  - clearly enunciating activities undertaken in the audit period, as opposed to earlier years;
  - linking its catchment activities to an overall strategy and set of goals for improved catchments (particularly in concert with broader, whole-of-government plans and its own environmental indicator program); and
  - enhancing the accuracy of the data.
- ▶ Hunter Water has introduced an effective complaint handling, training, monitoring and reporting system, namely the Customer Information System. Concurrently with this change, a new billing format was introduced which impacted on customers and saw an increase in complaints. This impact masked improvements in other categories (for example, field operations). Whilst some aspects of complaints have now returned to previous levels, others, such as the speed of answering and number of abandoned calls, have failed to meet targets.
- ▶ The Memoranda of Understanding to drive a *cooperative relationship* with regulatory agencies is evident only in the case of NSW Health. The MOU with Health is in its final year and has provided a good basis for an effective working relationship; evidence of a more strategic focus was provided. The MOUs with DECC and DWE have expired and the parties believe that MOUs are not necessary. Whilst, MOU-like '*Liaison Committees*' operated with these two agencies over 2006/07, the basis of these Committees (vis, role, structure, composition and frequency of meeting) would benefit from formalisation.

### Summary of Key Recommendations

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

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

### Licence Part 3 – Hunter Water's Responsibilities

There were no key recommendations for Hunter Water under its Responsibilities for MOUs.

## **Licence Part 5 - Customer and Consumer Rights**

It is recommended that Hunter Water:

- R5.1 Complete an update of its Code of Practice for Debt and Disconnection to reflect the new CIS system, new procedures and new management structures as they relate to customers.

## **Licence Part 6 - Water Quality**

It is recommended that Hunter Water:

- R6.1 Develop a Quality Assurance (QA) section for the Water Quality Monitoring Plan, which should also include provisions for the reporting of QA performance.
- R6.2 Ensure that approval of NSW Health is received in regard to Monitoring Plans before they are implemented.

## **Licence Part 7- System Performance**

It is recommended that the Minister:

- R7.1 Consider publicly commending/acknowledging Hunter Water, its staff and contractors for their planning, preparation and response to the June 2007 flood. Their performance demonstrated the highest professional standards, personal commitment and success in maintaining and restoring services to customers and ensuring public health and safety.

## **Licence Part 8 - Water Demand and Supply**

It is recommended that Hunter Water:

- R 8.1 Set the target for recycled water based on a more detailed analysis of potential savings and tangible projects.
- R 8.2 Report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future Integrated Water Resource Plan reports.

## **Licence Part 9 - Environment – Indicators and Plans**

There were no key recommendations required to ensure Hunter Water's compliance with Part 9.

## **Licence Part 10 - Catchment Management**

It is recommended that Hunter Water:

- R 10.1 Highlight or summarise its achievement in catchment management in the audited year, as compared to cumulative actions, within the relevant sections of its Annual Catchment.

- R10.2            Develop a catchment management framework of objectives, budgets, targets and performance reporting to guide its activities, and to the extent possible, coordinate this with its Environmental Indicator report requirements.
- R 10.3           Establish arrangements with DWE for the more timely provision of data from the Hunter Integrated Telemetry System and review the data verification systems of its remote telemetry (SCADA) data system.

## **Licence Part 12 - Complaint and Dispute Handling**

It is recommended that Hunter Water:

- R11.1           Investigate and report to the Consultative Forum on the efficiencies that the new Customer Service Information system has delivered since its introduction, including recommendations to improve the *speed of answering* and *abandoned calls*, and the future role of the CIS in the organisation.

It is recommended that IPART:

- R11.2           Consider formally acknowledging the contribution of Hunter Water in minimising the impact of the major storm even over the June Long weekend 2007 in terms of water service delivery and aversion of a public health event.

## **Ministerial Requirements**

There are no recommendations in relation to the Ministerial Requirements of the Operating Licence.

# 1. Introduction and Objectives

## 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 the Minister for Finance. A Board of Directors governs the Corporation.

Hunter Water is regulated by several State Government agencies 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 establishes Hunter Water's prices for providing services;
- ▶ The Department of Water and Energy (DWE) (the former Department of Planning and Natural Resources (DNR)), now, which administers Hunter Water's Water Management Licence granted under the *Water Act 1912*;
- ▶ The Department of Environment and Climate Change (DECC) (the former Department of Environment and Conservation (DEC)), which licences Hunter Water's wastewater systems under the *Protection of the Environment Operations Act 1997*; and
- ▶ NSW Health, with which Hunter Water has entered into a Memorandum of Understanding to facilitate effective interaction.

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. Bulk Water is also supplied to Dungog, small parts of the Singleton and the Great Lakes areas as well as to the Central Coast. An outline of Hunter Water's water supply network, including the area of operations for which Hunter Water is responsible, is shown in Figure 1-1.

**Figure 1-1 Hunter Water's Area of Operation**



Source: Hunter Water Corporation Annual Report 2006

The services provided by Hunter Water are delivered under the Operating Licence. 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 performance against its Environmental Management Plan (EMP) and the Integrated Water Resources Plan (IWRP). Wastewater treatment performance is specified under Environmental Protection Licences issued and managed by DECC.

## **1.2 Independent Pricing and Regulatory Tribunal**

The Independent Pricing and Regulatory Tribunal (IPART) was established in 1992 to regulate the pricing of monopoly services. On 1 November 2000 the NSW Government initiated the *Independent Pricing and Regulatory Tribunal and Other Legislation Amendment Act*, which, under Schedule 1, transferred Licence auditing and other regulatory responsibilities for the three metropolitan water authorities (Sydney Water, Hunter Water and the Sydney Catchment Authority) to IPART. Hunter Water was established by the *Hunter Water Act 1991*, which provides that the corporation is regulated by IPART.

## **1.3 The Auditor**

IPART commissioned GHD Pty Ltd to conduct the Operational Audit of Hunter Water for the 2006/2007-audit period. This commission was in accordance with Part 11.1 of the Operating Licence.

## **1.4 Scope of Operational Audit**

This is the fifth audit of Hunter Water against the requirements of the current Operating Licence. The audit covers the period from 1 July 2006 to 30 June 2007.

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 requirements of the Operating Licence;
- Assessment and reporting on progress by Hunter Water in implementing the Ministerial Requirements issued subsequent to the previous Operational Audit;
- Identification of any factors that affected Hunter Water's performance for the period from 1 July 2006 to 30 June 2007; and
- Recommendations resulting from this audit regarding ways in which Hunter Water can improve its performance.

The detailed scope for the Operational Audit is described in Part 11 of the Operating Licence, which is provided in Appendix B and summarised in Table 1-1.

**Table 1-1 Scope of the 2006/07 Audit**

<b>Part</b>	<b>Report on:</b>	<b>Report Section</b>
11.2.1 (a)	Compliance with obligations under Part 5 – Customer and Consumer Rights	Section 5
(b)	Compliance with obligations under Part 6 – Water Quality	Section 6
(c)	Compliance with obligations under Part 7 – System Performance	Section 7
(d)	Compliance with obligations under Part 8 – Water Supply and Demand	Section 8
(e)	Performance under Part 9 – Environment – Indicators and Plans	Section 9
(f)	Compliance with obligations under Part 10 – Catchment Management	Section 10
(g)	Compliance with obligations under Part 12 – Complaint and Dispute Handling	Section 11
(h)	<i>On-going compliance by Hunter Water with its Customer Contract and specific areas of non-compliance;</i>	Section 5
(i)	<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;</i>	Section 5
(j)	<i>The effectiveness of Hunter Water's internal complaint handling process under clause 12.1 and external dispute resolution under clause 12.2;</i>	Section 12
(k)	<i>Complaints made against Hunter Water to a court or tribunal under clause 12.3; and</i>	Section 12
(l)	<i>Any other matter required by this licence or the Act to be assessed or considered as part of the Annual Audit.</i>	Section 5 Section 7
11.2.2 (a)	Implementation of any Memorandum of Understanding	Section 4

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

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

## 1.5 Structure of the Audit Report

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

The audit report has been specifically prepared to meet the audit brief and Part 11 of the Operating Licence. The findings of the report are not presented in a '*prioritised order*' or '*order of significance*'. Rather, the report is designed to follow the structure of the Operating Licence. The report is structured into compliance sections that correspond to the key areas (Parts) of the Operating Licence (see Table 1-1). Each compliance section of the report provides the following:

- ▶ A *compliance summary* addressing the principal compliances and any non-compliances;
- ▶ A *requirements summary* placing in context and summarising the requirements of the Operating Licence against which the performance of Hunter Water is assessed;
- ▶ *Substantive evidence and findings* that support the assessments of compliance and are presented in compliance tables breaking each auditable requirement into sub-clauses, including:
  - A statement describing the *level of compliance* with the Licence condition; and
  - A detailed appraisal of the *findings* of the audit based on the evidence provided.

This is followed by:

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

## 2. Audit Methodology

### 2.1 Standards

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

### 2.2 Audit Preparation

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

#### **Draft Audit Plan**

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

#### **Inception Meetings**

Following the preparation of the draft audit plan, an inception meeting was held with Hunter Water's Managing Director and other representatives on 18 September 2007. IPART representatives also attended the meetings.

The primary objective of this meeting was to develop working relationships, mutual understandings and expectations relating to the requirements and process of the audit, to discuss and agree upon the changes to the audit methodology and to provide an opportunity for Hunter Water to present an overview of compliance and progress since the previous audit period.

#### **Audit Questionnaires**

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

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

Audit questionnaires were provided to Hunter Water several days prior to the audit interviews to allow Hunter Water the opportunity to prepare for the interview and collate the necessary documentary evidence.

## 2.3 Conduct of the Audit

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

Both Hunter Water and the Auditor generally adhered to the agreed protocols.

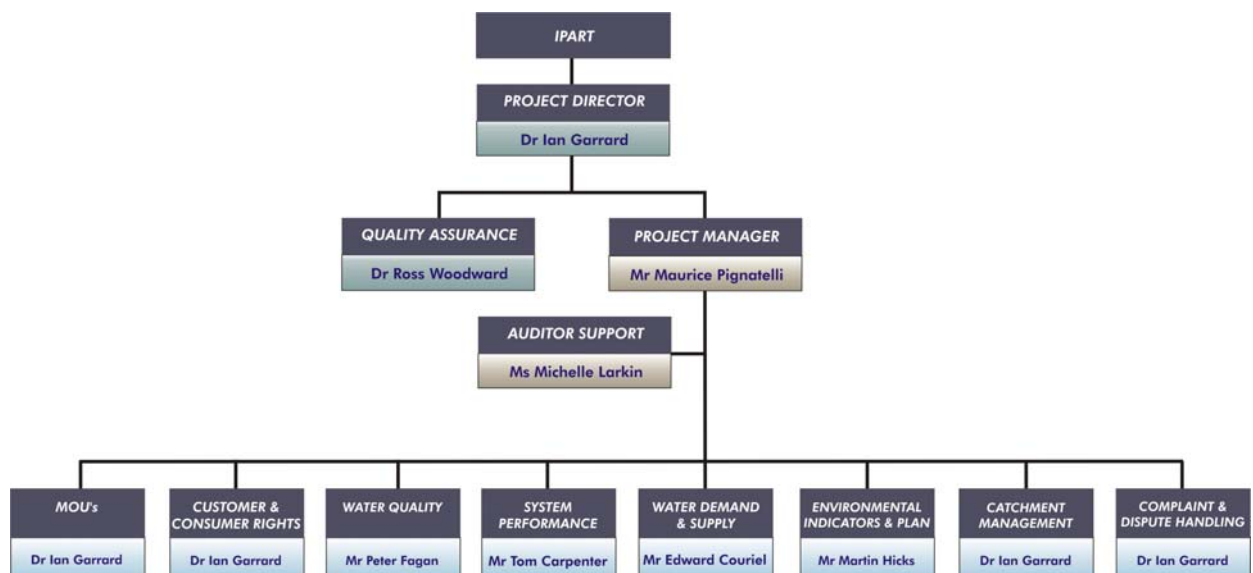
## 2.4 Audit Interviews

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

## 2.5 Audit Team

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

**Figure 2-1 Structure and Responsibility of the Audit Team**



## 3. Regulatory Regime

### 3.1 Introduction

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 provisions of the *Hunter Water Act 1991* establish the roles and responsibilities of Hunter Water. The Act establishes a set of sub-ordinate instruments – the Operating Licence and Memoranda of Understanding (MOUs). Such instruments impose requirements upon Hunter Water, which are measurable and can therefore be audited. The Operating Licence was in effect from 1 July 2002 until 30 June 2007.

This is the fifth audit conducted under the Operating Licence.

### 3.2 Hunter Water Act, 1991

Under Section 13 of the *Hunter Water Act 1991*, Hunter Water was 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 was also required to ensure that the systems and services met the quality and performance standards specified in the Operating Licence in relation to water quality, service interruptions, price levels and other matters set out in the Operating Licence.

### 3.3 Operating Licence

Hunter Water was required to conduct its activities in accordance with the provisions of the Operating Licence issued under Section 12 of the *Hunter Water Act 1991*. The objective of the Licence was to enable and require Hunter Water to provide services within its area of operations, including:

- ▶ Meet the objectives and other requirements imposed on it under the Act;
- ▶ Comply with the quality and performance standards in the Licence;
- ▶ Recognise the rights given to customers and consumers; and
- ▶ Be subject to annual audits of compliance against the Licence.

### 3.4 Customer Contract

The Customer Contract set out the rights and obligations of each customer and the minimum standards of customer service that Hunter Water was to provide, payment arrangements, procedures for restrictions and disconnections, redress and responsibilities for maintenance. The Customer Contract came into effect on 1 September 2003 replacing a previous contract.

### 3.5 Memoranda of Understanding

The Operating Licence requires Hunter Water to maintain a MOU with NSW Health for the term of the Licence.

At the commencement of the Licence, Hunter Water had also entered into MOUs with both the former Environment Protection Authority (EPA), and the former Department of Land and Water Conservation (DLWC). Both of these MOUs lapsed prior to the commencement of this audit period.

The Licence states that the purpose of the Memoranda is to form the basis for '*cooperative relationships*' between the parties and, in the case of NSW Health, recognise its role in providing advice in relation to drinking water quality standards and the supply of water which is safe to drink.

### 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 was issued to Hunter Water under the *Water Act 1912* and is now administered by the Department of Water and Energy. 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 the Anna Bay Sandbeds. The WML also contains requirements detailing the management of water resources consistent with the principles of Ecological Sustainable Development (ESD) and the prevention of contamination or degradation of the resources. Hunter Water is also required to provide data, reports and information to DWE 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 years. This review conducted between Hunter Water and the Department of Infrastructure, Planning and Natural Resources (DIPNR – formerly DLWC) occurred by December 2003 as required. Hunter Water was issued with an amended Licence that took force from 25 June 2004.

### 3.7 Other Acts

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

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

- ▶ *Dams Safety Act, 1978.*

### **3.8 Ministerial Requirements**

Hunter Water's compliance with the Ministerial Requirements resulting from the recommendations of the 2005/06 audit has been addressed in the corresponding section of the report related to that particular issue, namely Sections 7 and 8.

## 4. Hunter Water's Responsibilities

### 4.1 Summary of Findings

The implementation of Hunter Water's requirements, which primarily relates to the MOU with the NSW Department of Health, referred to in Clause 3.3 is considered to be **High** and to have improved over the year. Whilst Clause 3.3 also refers to MOUs with the EPA and DLWC, the Licence does not require Hunter Water to maintain these MOUs.

#### ► MOU – NSW Department of Health ('NSW Health')

Hunter Water is in the final years of its current MOU with NSW Health and continued to build on its '*cooperative relationship*' at an operational level. The role of the MOU is to "...*discuss broad principals, directions and policies...*" and to do so "...*considering long term strategic issues...*" and to "...*annually review progress*". Recommendations were made in the 2005/06 audit to enhance this strategic role and evidence was provided of Hunter Water's efforts, through increased tracking and management of strategic issues. There was evidence of the continued exchange of water quality management, monitoring and improvement plans between NSW Health and Hunter Water.

#### ► MOU – Environmental Protection Authority (EPA)

Hunter Water's MOU with the Environmental Protection Authority (now part of the Department of Environment and Climate Change, DECC) expired in 2005 and, by agreement between the agencies, was not renewed. Hunter Water indicated that there is '*operational*' correspondence and a strategic relationship between the DECC and Hunter Water and this was confirmed through viewing "*Liaison Meeting*" agendas and minutes (18 September 2006 and 13 March 2007). Formalisation of the roles, responsibilities, composition and frequencies of the "*Liaison Meetings*" has been recommended.

#### ► MOU – Department of Land and Water Conservation (DLWC)

Hunter Water's MOU with the Department of Land and Water Conservation (now the Department of Water and Energy, DWE) has expired and, by agreement, was not renewed. Hunter Water operated a *Strategic Liaison Committee* with DWE that met twice in the year. It is recommended that the foundation of this Committee be formalised with DWE.

### 4.2 Summary of Requirements

The Operating Licence requires Hunter Water to maintain a MOU with NSW Health for the term of the Licence. The Licence (Clause 3.3.1) recognises the need to *maintain* the MOU with NSW Health. At the commencement of the Licence, Hunter Water had also entered into MOUs with both the former Environment Protection Authority and the Department of Land and Water Conservation.

Clause 3.3.2 states that the purpose of the Memoranda is to form the basis for '*cooperative relationships*' between the parties and, in the case of NSW Health, recognise its role in providing advice on drinking water quality standards and the supply of water that is safe to drink.

Whilst the Operating Licence (Clause 11.2.1) requires the annual audit to report on Hunter Water's compliance with its obligations under the various Parts of the Licence, in the case of the MOUs, Clause 11.2.2 (a) indicates that the auditor may report on Hunter Water's *'implementation'* of any MOU noted in the Licence.

### 4.3 Details of Compliance

**Table 4-1 Licence Part 3 – Hunter Water’s Responsibilities**

Clause	Requirement	Implementation	Findings
11.2.2 (a)	IPART or any person preparing the Annual Audit must investigate and prepare a report on .... Hunter Water’s implementation of any Memorandum of Understanding referred to in Clause 3.3.	High implementation	<p>Clause 3.3 of the Operating Licence refers to Memoranda of Understanding (MOU) with three agencies. Hunter Water is to use its best endeavours to maintain a MOU with NSW Health. The Operating Licence acknowledges that, at the Licence commencement, Hunter Water had entered into MOUs with 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.</p> <p>Hunter Water maintained its MOU with NSW Health over the audit period, at the end of which the MOU expired. Over the year, four Liaison Committee meetings were held under the Health MOU (on the 14<sup>th</sup> August and 6<sup>th</sup> December, 2006 and 27<sup>th</sup> February and 4<sup>th</sup> June, 2007). Minutes of each meeting were reviewed. A number of improvements in implementation had been made over the year, including the introduction of a “<i>checklist</i>” to record MOU requirements actioned at each meeting and to review progress in implementing the MOU over the year. The focus of the Liaison Committee was primarily on operational matters (for example, taste and odour levels in Chichester sources, blue green algae in Grahamstown Dam, Drinking Water Quality Monitoring Plan and Water Quality Improvement Plans). Over the year, a process was set in train to prepare a new MOU to coincide with the new Operational Licence (scheduled to begin on 1 July 2007). As such, the MOU has been maintained and evidence was provided that a good working relationship existed between the two parties.</p> <p>The 2005/06 audit report recommended that implementation of the MOU could be improved by providing increased strategic direction. Some evidence was provided to demonstrate an increasing consideration of strategic directions (for example, the role Hunter Water could play in assisting the Gosford and Wyong water supply and adoption of 2004 Drinking Water Guidelines) though opportunities remain to use the Committee in the more active consideration of “<i>long term strategic issues and policies</i>” as set out in the MOU.</p> <p>Hunter Water is not required to have MOUs with EPA or DLWC, although it is equally not limited to the persons with whom it may have an MOU.</p> <p>Hunter Water’s MOUs with the EPA and DLWC expired during an earlier operation period. Hunter Water sought to renew the MOUs, however it was agreed with both agencies that an MOU was not necessary.</p> <p>There was evidence of ongoing ‘<i>operational</i>’ correspondence between Hunter Water and DECC and this included some strategic issues (such as buffer zones around waste water treatment facilities, setting load limits for reuse schemes and upgrades of STPs).</p> <p>In regard to Hunter Waters’ relationship with the Department of Water and Energy (DWE), which has taken on the roles of the former DLWC, a Liaison Committee meets twice a year and addresses operational issues (for example, relating to the Water Licences and joint field inspections) as well as some strategic issues (such as the</p>

Clause	Requirement	Implementation	Findings
			<p>development and potential environmental impact of the future water supply). This is outside the MOU process and neither party believes an MOU to be necessary (this was confirmed in correspondence from the DWE, refer to Appendix F).</p> <p>In aggregate, the implementation of Hunter Water's requirements, which primarily relate to the MOU with Health referred to in Clause 3.3, has improved over the previous operation period, from "Moderate" to "High".</p>
	<p>► NSW Health;</p>	High implementation	<p>Under the Operating Licence, Hunter Water is required to maintain a MOU with NSW Health. The purpose of the MOU is to form the basis for <i>co-operative relationships</i> between the parties to the MOU. In particular, the MOU is to recognise the role of NSW Health in providing advice to the Government in relation to drinking water quality standards and the supply of water which is safe to drink.</p> <p>Hunter Water has a MOU in place with the Department of Health, dated 19 April 2002. The MOU has not been updated since that date and expired with the term of the current Operating Licence in 2007.</p> <p>Hunter Water demonstrated improved implementation of the MOU and efforts to prepare a new MOU over the year, as outlined in Clause 11.2.2.(a) above.</p>
	<p>► The former EPA (now the Department of Environment and Climate Change); and</p>	Not implemented	<p>The Operating Licence acknowledged that at the commencement date of the Licence, Hunter Water had entered into MOUs with both EPA and DLWC. However, the Operating Licence simply '<i>acknowledges</i>' the MOUs and does not contain a requirement to maintain the MOUs. Hunter Water confirmed that the MOU expired on 30 June 2005. The nature of the cooperative working relationship between the two parties is outlined in Clause 1.2.2.(a) findings above.</p>
	<p>► The former Department of Land and Water Conservation (now the Department of Water and Energy)</p>	Not implemented	<p>The Operating Licence acknowledged the presence of a MOU with DLWC (now DWE) at the commencement date of the Licence, however, there was no requirement to maintain that MOU. Hunter Water confirmed that the MOU was not implemented during 2006/07 and has expired. The nature of the cooperative working relationship between the two parties is outlined in Clause 1.2.2.(a) findings above.</p>

## 4.4 Discussion

### 4.4.1 Department of Health

Hunter Water demonstrated an improved level of implementation of the MOU requirements over this operating year. This demonstration included improved processes (including an MOU *Checklist* to review progress, annually, on the implementation of the MOU), efforts to develop a new MOU for the forthcoming operating period and an enhanced focus on strategic issues. It demonstrated that a cooperative working relationship was established and maintained between the parties.

In correspondence with the auditor (refer to NSW Health's letter in Appendix G), the Department of Health confirmed that an open and cooperative working relationship was established between the parties. NSW Health also indicated the following.

- ▶ Hunter Water has met the requirements under the Operating Licence and MOU for the audit period;
- ▶ Hunter Water continues to progress the application of the framework for the provision of safe drinking water as per the *Australian Drinking Water Guidelines* 2004. Hunter Water actively engages, informs and seeks guidance from NSW Health to progress meeting the requirements.
- ▶ One incidence of non-compliance was noted. This involved failure of a computer process management system at Anna Bay Water Treatment Plant in December 2006. This caused a high concentration of fluoride in drinking water for a short period of time (11 hours), however the matter was quickly identified and corrected. NSW Health did not consider there to be any risk to public safety.

Under separate correspondence, NSW Health acknowledged that Hunter Water, in response to the June long weekend (2007) storms, had made a:

*"phenomenal effort to ensure safe drinking water to our communities"* and had contributed to *"averting a potential public health crisis"*, (Chief Executive, Hunter New England, NSW Health, 16 July 2007);

Hunter Water was also able to demonstrate that it:

- ▶ Undertook Liaison Committee Meetings on a three monthly basis and informal meetings on a more regular basis;
- ▶ Tabled the Drinking Water Quality Monitoring Plan 2007/08;
- ▶ Tabled the Drinking Water Quality Improvement Plan 2007/08; and
- ▶ Has a protocol in place for water quality exceptions reporting.

While the MOU *Checklist* records (by way of a tick) that issues in the MOU have been addressed at respective meetings, it is recommended that the checklist also include a brief summary of the outcomes of the Committee's actions (in the form of, for example, issue title and descriptor, progress or outcome, and completion date).

#### **4.4.2 Environmental Protection Authority (now part of the DECC)**

Hunter Water advised that it has six-monthly Strategic Liaison Committee Meetings with the DECC, although no evidence was provided of the formalisation, structure or role of the Committee. Minutes of the meetings in September 2006 and March 2007 were reviewed and it was noted that the Committee focuses on:

- ▶ Buffer zones around STPs; and operational matters such as Hawksbury licences and treatment plant operations; and
- ▶ Updates on Hunter Water's capital works and treatment plant upgrade programs.

Hunter Water also advised that it maintains ongoing contact with DECC at the operational level. This is particularly related to the review and assessment of its capital works program.

#### **4.4.3 Department of Land and Water Conservation (now DWE)**

Hunter Water advised that a Strategic Liaison Committee (SLC) was formed as part of the then existing MOU with the DLWC. The scope and objectives of the SLC was set out in the MOU that has subsequently expired, although the SLC has continued to operate. However, evidence of the formalisation, between Hunter Water and the newly created DWE, of the continuation of the SLC (such as a revised SLC composition, role and scope) was not available.

An *Agenda* for a SLC meeting on 8 September 2006 and minutes of the SLC meeting, 24 April 2007, were available, including an Action Register from the meeting. The minutes indicated that:

- ▶ Strategic issues were discussed, including the planning and construction timetable for the Tilligra Dam, Gosford Wyong Supply strategies and Balickera Pump Station Upgrades; and
- ▶ Operation issues were also examined, including Water Licence matters, and "incident reports" on non-compliances.

In correspondence to the auditor, dated 15 October 2007 (see Appendix G), DWE advised that it considers the SLC to be an appropriate forum for discussion with Hunter Water on Licence and other strategic issues. Further, DWE considers the MOU is not necessary and the MOU acknowledgement should be removed from the revised Operation Licence.

#### **4.5 Factors Affecting Implementation**

For a MOU to be effectively implemented, it is necessary for both parties to maintain and adhere to the principles and requirements within the MOU. In the case of the MOUs with both the DECC and DWE, the parties agreed not to renew the MOU applying in earlier operating periods.

However, liaison-type committees have continued to function with both agencies. The committees meet, to advance strategic and operational issues, on a number of occasions during the year. The foundations of the committees were not available, although appear to largely flow on and adopt procedures as operated under the MOUs. As these committees now form the basis of the relationship Hunter Water has with these agencies, the formalisation of the Committees (for example setting out the Committee's roles, structure, composition and frequency of meetings etc) would assist in ensuring that an agreed basis and commitment is established.

## 5. Customer and Consumer Rights

### 5.1 Summary of Findings

#### ► Customer Contract

The majority of Customer Contract requirements under this Licence have been addressed in previous audit periods and were a **No requirement** in 2006/07. Hunter Water achieved **Full compliance** with the one remaining clause, through making its Customer Contract publicly available on its website.

#### ► Consumers

Hunter Water continued to achieve **Full compliance** with its obligations under the Licence relating to Consumers. When complaints are entered into the computerised system, Hunter Water does not identify whether the complainant is a customer or consumer and thus fulfils its obligations under the Customer Contract (relating to complaint handling and complaint resolution debt and disconnection procedures), as if those obligations also extended to Consumers.

#### ► Code of Practice on Debt and Disconnection

The majority of Debt and Disconnection requirements under this Licence have been addressed and were **No requirement** in 2006/07. Hunter Water achieved **Full compliance** with the remaining clause, which related to the dissemination of information on the Code to customers.

#### ► Consultative Forum

The majority of clauses relating to the establishment of the Consultative Forum were satisfied in previous years and were **No requirement** in 2006/07. Hunter Water achieved **Full to High compliance** with those requirements that relate to this audit period including: the provision of quality advice relevant to customers and consumers on the Customer Contract and planning and operational issues; dissemination of information relating to the Consultative Forum Charter; and maintenance of the nominated representative groups in the membership of the Forum.

#### ► Ministerial Requirement 2005/06

Hunter Water has continued to look at options to reduce the number of customers affected by disconnection and flow restrictions measures for non-payment. It introduced a new disconnection Policy in May 2006, commenced to trial a further step in its credit management process in September 2006 and further developed these during 2006/07.

## 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; and
- ▶ **Clause 5.4 – Consultative Forum:** This clause covers the establishment of a Consultative Forum, its membership, charter, provision of information to the Forum, reports on the Forum, and evaluation of the Forum's effectiveness.

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

Further, Clause 11.2.1(h) requires IPART, or the auditor, to investigate and report on Hunter Water's compliance with its Customer Contract and specific areas of non-compliance. Clause 11.2.1(i) requires IPART, or the auditor, to investigate and report on Hunter Water's Compliance with its code of practice and procedures on debt and disconnection under Clause 5.3 and any similar initiatives developed by Hunter Water.

## 5.3 Ministerial Requirements

In addition, over the 2005/06 Operating year, the Minister required:

*Hunter Water is to continue to look at ways at reducing the number of customers affected by disconnection and flow restrictions measures for non-payment.*

An update on the compliance with this Minister's Requirement is outlined in Table 5-3.

## 5.4 Details of Compliance

**Table 5-1 Licence Part 5 – Customer and Consumer Rights**

Clause	Requirement	Compliance	Findings
<b>5.1</b>	<b>Customer Contract</b>		
5.1.1	<p>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.</p> <p>These rights and obligations are in addition to the rights and obligations conferred by the Act and any applicable law.</p>	No requirement	Clause is descriptive 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	Clause is descriptive 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 download 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	<p>A review of Hunter Water's website confirmed that the Customer Contract was posted for downloading, free of charge.</p> <p>The Customer Contract was available at the Hunter Water Head office free of charge.</p> <p>Advice was sought as to the number of copies of the Customer Contract made available at its premises, for access or collection by the public. Hunter Water advised that it last printed the Customer Contract in 2003 at which time some 500 were distributed to its Customer Centres and some 200 remained to be distributed. This would indicate an average circulation of less than 100 per year.</p>
5.1.4	The Customer Contract may only be varied in accordance with the Act.	No requirement	There has been no amendment to the Customer Contract during this audit period, the last changes being made September 2003.
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	No requirement	No requirement for this audit period.

Clause	Requirement	Compliance	Findings
	Commencement date.		
5.1.6	The review must have regard to the system performance standards in Part 7 of this Licence.	No requirement	No requirement for this audit period.
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	No requirement for this audit period.
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	No requirement for this audit period.
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"> <li>(a) Provides a brief explanatory introduction to the Customer Contract;</li> <li>(b) Summarises the key rights and obligations of Customers under the Customer Contract; and</li> <li>(c) Lists Hunter Water's local offices and emergency contact numbers in its Area of Operations.</li> </ul>	No requirement	No requirement for this audit period. The requirement was met in 2003. A copy of the 2003 pamphlet was sighted.
5.1.10	<p>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:</p> <ul style="list-style-type: none"> <li>(a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;</li> </ul>	No requirement	<p>This requirement was complied with during the 2002/03 audit period.</p> <p>A review of Hunter Water's website confirmed that the 2003 pamphlet remained available free of charge.</p> <p>Hunter Water provided evidence that the mail-out occurred in the March-June 2006 billing cycle.</p> <p>Hunter Water advised that the Rental Bond Board forms part of the Office of Fair Trading.</p>

Clause	Requirement	Compliance	Findings
	(b) to Customers or Consumers, at least once every two years with their bills; and  (c) to any other person on request.		Documentation was cited to confirm that Hunter Water's pamphlets were provided to that office for collection by interested persons.
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	<p>This is an enabling clause. It does not require Hunter Water to meet specific requirements if other contracts or arrangements are entered into.</p> <p>However, Hunter Water has developed and applies a proforma <i>"Non Standard Water Service Agreement"</i> (sighted) relating to the supply of water from water mains, generally before treatment, to customers servicing Dungog, the Mid Coast, and Wyong areas.</p>
<b>5.2 Consumers</b>			
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	<p>Hunter Water has adopted a policy and support system that does not differentiate between customers (or property owners) and consumers (for example, the tenants of those properties). The Complaints Management System captures Hunter Water's complaints handling and complaints resolution procedures and the system's procedures do not discriminate between customers and consumers for non-bill-related issues.</p> <p>When complaints are entered into the computerised system, Hunter Water does not identify whether the complainant is a customer or consumer. There is no provision in the computerised system to log whether the complainant is a customer or consumer.</p> <p>It is noted however that the requirements of this Clause are not explicitly stated in Hunter Water's Policies on Complaints handling and resolution.</p>
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 advised that '<i>consumers</i>' have had access to and been treated as '<i>customers</i>' through the debt and disconnection procedures (S5&amp;6 of the Contract).</p> <p>Notwithstanding the above, consumers can be affected by water restrictions should the landowner miss payment of an account. In such an instance, the procedures outlined in the Code of Practice for Debt and Disconnection Pamphlet are followed by Hunter Water. To ensure equity, Hunter Water will send a dual notice (to customer and respective consumer) if a restriction is proposed. Also, it will accept water bill payment directly from consumers if the customer has defaulted so that the consumer is not unduly disadvantaged.</p>

Clause	Requirement	Compliance	Findings
<b>5.3</b>	<b>Code of Practice and Procedure on Debt and Disconnection</b>		
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	This requirement was addressed in a previous audit.
5.3.2	The Code must: <ul style="list-style-type: none"> <li>(a) provide for deferred payment or payment by instalment options for charges; and</li> <li>(b) provide that the payment options referred to in (a) are to be advised in bills.</li> </ul>	No requirement	This requirement was addressed in a previous audit.  To demonstrate the workings of the Code, Hunter Water also provided advice as to the number of Vouchers it issued over the year being 2,152 to a value of \$53,800.
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.	No requirement	This requirement was addressed in a previous audit.
5.3.4	Hunter Water must disseminate free of charge information on its Code: <ul style="list-style-type: none"> <li>(a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;</li> <li>(b) to Customers or Consumers, at least once each year with their bills; and</li> <li>(c) to any other person on request.</li> </ul>	Full compliance	A review of Hunter Water's website confirmed that a "Code of Practice and Procedure Debt and Disconnection" pamphlet was available free of charge.  The pamphlet was available at Hunter Water's Head Office free of charge.  It was noted that the pamphlet, both on the web and as provided in hardcopy, could be improved (vis. under the heading "How can we help you?" (line 20) no spacing has been provided between the words making it difficult to read and understand). This editorial error should be corrected. Hunter Water advised that it was undertaking a review of the Code and was aiming to complete the review by December 2007.  Hunter Water provided record evidence that it included the "Customer Contract Summary" pamphlet in the March-June 2006 billing cycle.  Hunter Water advised that the Rental Bond Board forms part of the Office of Fair Trading. Pamphlets were provided to that office, for collection by interested persons.

Clause	Requirement	Compliance	Findings
<b>5.4</b>	<b>Consultative Forum</b>		
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	<p>The Consultative Forum was established during previous audit periods. Hunter Water provided minutes of meetings to confirm that it meets quarterly with the Forum.</p> <p>The meetings have structured agendas and the minutes are published in the <i>Open Board</i>. Minutes of the four (vis 14 September and 14 December , 2006 and 15 March and 14 June 2007) Forum meetings over 2006/07 were reviewed.</p>
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>Hunter Water has provided the opportunity for the Forum to contribute high quality advice on the interests of Customers and Consumers. Hunter Water has provided briefings, papers and updates on the following matters to the Forum over the year:</p> <ul style="list-style-type: none"> <li>▶ Tillegra Dam planning and approvals;</li> <li>▶ Outcomes of Hunter Water 2005/06 Operational Audit;</li> <li>▶ Revised Web Page;</li> <li>▶ Customer Perceptions;</li> <li>▶ Performance Indicators and Annual Report; and</li> <li>▶ Information sessions.</li> </ul>
5.4.3	A Consultative Forum under this Licence must be established within 6 months of the Commencement date.	No requirement	This clause has been satisfied in previous years.
5.4.4	<p>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.</p> <p>The term of the members of that forum will expire no later than six months after the Commencement date.</p> <p>After that, the membership of the Consultative Forum must be determined in accordance with the Consultative</p>	No requirement	This clause has been satisfied in previous years.

Clause	Requirement	Compliance	Findings
	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.	Full compliance	During this audit period, three members of the Forum resigned and three new members were appointed.
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> <p>(a) business and Consumer groups;</p> <p>(b) organisations representing low income households;</p> <p>(c) people living in rural and urban fringe areas;</p> <p>(d) residential Consumers;</p> <p>(e) environmental groups;</p> <p>(f) local government; and</p> <p>(g) people from non-English speaking backgrounds.</p>	High compliance	<p>Whilst it could be interpreted that the Forum included representatives from all groups specified in this Clause, there is some degree of overlap in members representation. For example, the Local Council representatives not only represented their respective Councils but also were cited as being representative of "residential consumers"</p> <p>It is recommended that Hunter Water clearly, and explicitly, align the forum representatives against the required Forum Groups to confirm and make clearer appropriate representation.</p> <p>Generally, there has been good representation from Consultative Forum members, excepting three members. Attendance has averaged 65% over the year. Hunter Water has written to the three organisations that have not had representatives at the recent meetings to encourage attendance.</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> <p>(a) the role of the Consultative Forum;</p> <p>(b) selection criteria on how members will be drawn from the community, and information on how vacancies for membership will be advertised,</p> <p>(c) the procedure for appointment of members,</p>	No requirement	<p>This clause has been satisfied in previous years.</p> <p>Hunter Water advised that the Charter of the Forum is under review (although subsequent to 30 June 07) in light of the introduction of a new Operating Licence in 2007/08.</p>

Clause	Requirement	Compliance	Findings
	<p>(d) the term of members,</p> <p>(e) information on how the Consultative Forum will operate;</p> <p>(f) a description of the type of matters that will be referred to the Consultative Forum;</p> <p>(g) procedures for the conduct of Consultative Forum meetings, including the appointment of a chairperson;</p> <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; and</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.	High compliance	<p>Examples of information provided by Hunter Water to the Forum are listed in the comments at Clause 5.4.2.</p> <p>In 2006/07, the Form undertook a "Forum Effectiveness Survey". The survey was a self assessment and the results (from Item 5, Consultative Forum Minutes 14 December 2007) and the key outcomes included:</p> <ul style="list-style-type: none"> <li>• Some 50% of the 16 surveys distributed were returned;</li> <li>• Of the participants, 75% rated the "effectiveness" of the Forum as between 8 and 10 (on a 1-10 scale);</li> <li>• A highlight was that it was an open forum with <i>grass roots</i> involvement; and</li> <li>• Some members reported few "weaknesses", apart from a lack of attendance.</li> </ul> <p>Telephone interviews were held with a sample of three Consultative Forum members to determine the effectiveness of the Forum in providing high quality customer, consumer and</p>

Clause	Requirement	Compliance	Findings
			<p>broader advice and two-way communication.</p> <p>The feedback from the telephone interview included a number of key outcomes:</p> <ul style="list-style-type: none"> <li>• The Forum was considered to be very effective in communicating between Hunter Water and Forum members;</li> <li>• Excellent performance of the Chair and general governance in operations (vis agenda, minutes, follow up etc);</li> <li>• Attendance levels of some members could be improved and suggestions such as having an alternate member, shorter meetings with a more strategically focussed agenda (for example, on the top 4-5 issues supported by 'other business' in case members need to leave early);</li> <li>• Need for a consumer/ energy/pricing advocate on the Forum;</li> <li>• Field visits (optional) so member had better understanding of Hunter Water Operations; and</li> <li>• Member rotation program, to keep Member's interest fresh and participation active.</li> </ul>
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	<p>A review of Hunter Water's website confirmed that the Consultative Forum Charter was available free of charge.</p> <p>The Consultative Forum Charter was available at the Hunter Water Head Office free of charge.</p> <p>Advice has been provided that "no requests" were made at Hunter Water offices for a copy of the Charter over 2006/07.</p>
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	<p>The report on the establishment of the Consultative Forum and the development of the Consultative Forum Charter has been satisfied in previous years.</p> <p>The self-assessment on the "effectiveness" of the Forum was presented to the Forum at its meeting on 14 December 2006. (See Clause 5.4.8 for further details).</p>
5.4.11	As part of the Licence review referred to in clause 2.3.1,	No requirement	This clause does not impose a requirement on Hunter Water.

Clause	Requirement	Compliance	Findings
	IPART must evaluate and report on the effectiveness of the Consultative Forum and compliance with the Consultative Forum Charter.		

**Table 5-2 Licence Part 11 – Compliance with the Customer Contract and Code of Practice on Debt and Disconnection**

Clause	Requirement	Compliance	Findings
11.2.1(h)	Clause 11.2.1(h) requires IPART or the auditor to investigate and report on-going compliance with its Customer Contract and specific areas of non-compliance.	High compliance	<p>Overall Hunter Water achieved predominantly high compliance with the Customer Contract. It demonstrated that it closely monitors key indicators (as outlined in Part 7 Operating Licence) of the services it provides and has established procedures to consistently apply many of the requirements of the Customer Contract.</p> <p>Examples of on going compliance include:</p> <ul style="list-style-type: none"> <li>• Regular customer research including Customer Perception (<i>"2007 Domestic Customer Perception Survey"</i> by IPOS, September, and Hunter Water Customer Satisfaction monitoring that it undertakes on monthly basis;</li> <li>• "Regulatory Monitor" which involves systems, training ("Customer Information System, Case and Enquiry Training" Handbook sighted) and monitoring to record enquiries, cases and complainants (through "quicknotes" inquiry facility);</li> <li>• A Complaints Management System involving policy (such as debt collection), structure (including a Customer Service Group) and a system of complaint resolution (including escalation through to an external, independent third party (EWON) if needed); and</li> <li>• Dissemination of Information through the Billing system to advise customers of Customer Contract and the steps available to them under the Contract.</li> </ul> <p>Further investigation determined:</p> <ul style="list-style-type: none"> <li>• Hunter Water's Customer Satisfaction survey results indicated: <ul style="list-style-type: none"> <li>○ an average satisfaction level for 2006/07 of 84% (monthly range 71-94%); and</li> </ul> </li> </ul>

Clause	Requirement	Compliance	Findings
			<ul style="list-style-type: none"> <li>○ a falling satisfaction from Jan –Jun 2007, primarily as a consequence of the introduction of new billing system.</li> </ul> <p>A further breakdown of compliance with each section of the Customer Contract is presented in Appendix G.</p>
11.2.1(i)	Clause 11.2.1(i) requires IPART or the auditor to investigate and report on-going Hunter Water's Compliance with its code of practice and procedures on debt and disconnection under Clause 5.3 and any similar initiatives developed by Hunter Water.	Full compliance	<p>Hunter Water's procedures are, generally, consistent with the procedures outlined in the Code of Practice. Details of its compliance with the Code of Practice on Debt and Disconnection are provided in Appendix H.</p> <p>Since developing the Code, changes have been made to the:</p> <ul style="list-style-type: none"> <li>▶ Establishment of the new Customer Information (CIS) System;</li> <li>▶ Management structure (Customer Service Centres replaced by a centralised Contact Centre); and</li> <li>▶ Updated procedures (discussed in Table 5.3 below).</li> </ul> <p>Hunter Water has made these changes in an effort to increase efficiency and consistency in applying the Customer Contract and the Code of Practice on Debt and Disconnection. Hunter Water demonstrated the application of the new CIS system, which was established over the operating year.</p>

**Table 5-3 Licence Part 5 – Ministerial Requirement 2005/06**

Clause	Requirement	Compliance	Findings
MR5.1 in 2005/06	In 2005/06 the Minister set Hunter Water the requirement to continue to look at ways at reducing the number of customers affected by disconnection and flow restrictions measures for non-payment.	Full compliance	<p>In response, Hunter Water introduced a new disconnection policy and a credit management process, in 2006.</p> <p>Changes to the debt and disconnection policy, included:</p> <ul style="list-style-type: none"> <li>▶ The dollar trigger for recovery action was lifted from \$250 to \$350 in 2006 and is now (2007) \$500. This reduces the number of customers with outstanding amounts which reach the restriction stage of the process;</li> <li>▶ a 2006 cap of 200 was placed on the maximum number of restrictions Hunter Water could apply in any month and is now (2007) further reduced to 50;</li> <li>▶ no properties are to be disconnected for non-payment of outstanding amounts without prior approval at General Manager level;</li> <li>▶ Hunter Water reduced the number of disconnections to 2 in 2006/07 (compared to 10 in 2005/06 period and 30 in 2004/05 period); and</li> <li>▶ The numbers of restrictions in 2006/07 has dropped considerably to 778 (2,043 in 2005/06 and 1,582 in 2004/05) and of these 691, or some 90%, were subsequently removed (once the account had been paid or a payment plan agreed with the customer) within 24 hours. No pensioner was subjected to a restriction.</li> </ul>

## 5.5 Discussion

Hunter Water has applied a comprehensive framework of policy, systems, training, monitoring and reporting to achieve compliance with its customer and consumer rights requirements.

## 5.6 Factors Affecting Compliance

No extraordinary factors affected Hunter Water's compliance with Part 5 and Part 11.2.1(h) over the audit.

Hunter Water introduced a new billing system in November 2006 that created an increase in complaints, although by June 2007 complaints had returned to pre change levels. It has been recommended that the *lessons learnt* through this experience should be collated along with a series of recommendations to minimise the impact of similar changes in the future. These recommendations should be presented to the Consultative Forum for review and consideration prior to the Hunter Water Board resolving on these recommendations.

Compliance with the Code of Practice for Debt and Disconnection (Clause 11.2 (i)) was affected by the implementation of new billing procedures and the roll-on impact relating to restrictions and disconnection. However, it must be recognised that Hunter Water was quick to determine, through its complaints monitoring, that issues were arising with the new Billing system and, to its credit, it responded with increased information, payment time and plan extensions and, in general, actively managed the change issues to mitigate the impacts.

Under its Operating Licence, Hunter Water is required to report on its internal complaints handling performance. The Complaints Management System is one of the two systems (the other being the Assets and Operations Maintenance System, AOMS) used to record complaints by category. In 2006/07, Hunter Water adopted a general target to reduce complaints by some 24%, although it achieved greater reduction in particular categories (vis Operational complaints reduced by 40% and Capital complaints by 54%). These reductions are considered to be challenging targets. To drive these reductions the root causes were analysed, process improvements were set and complaint reduction targets reinforced by inclusion into General Manager's performance contracts. Whilst the Complaint Management System (CMS) provides a sound basis to monitor performance, its categories are not fully aligned with Hunter Water's responsibilities under its Customer Contract. Thus it is not possible to fully report on the achievement of all the Customer Contract categories.

## 6. Water Quality

### 6.1 Summary of Findings

#### ▶ Drinking Water Quality – Standards

**Full compliance** was achieved on drinking water quality standards with the Licence requirements.

#### ▶ Drinking Water Quality – Monitoring

**Full compliance** was achieved with this requirement of the Licence. The auditor notes that the current practices in regard to reliance on NATA accreditation as the only form of Quality Assurance and Quality Control are a minimum. These provisions cover specific activities within the monitoring program but do not address the issues of Quality Assurance and Quality Control of the monitoring program as a whole. Consideration should be given to including specific Quality Assurance and Quality Control components of the monitoring program as whole.

#### ▶ Drinking Water Quality – Reporting

**Full compliance** was achieved with this requirement of the Licence. In keeping with the audit observation on Drinking Water Quality – Monitoring, consideration should be given to including reporting of quality assurance data as part of this report.

#### ▶ Drinking Water Quality – Planning

**Full compliance** was achieved with this requirement of the Licence. There was a lack of evidence to confirm that the Department of Health had reviewed and agreed with the Water Quality Improvement Plan and the Incident Management Handbook.

#### ▶ Other Grades of Water

**Full compliance** was achieved with this requirement of the Licence.

#### ▶ Environmental Water Quality

**Full compliance** was achieved with this requirement of the Licence.

Hunter Water supplied drinking water of an excellent quality to its customers during the 2006/07 audit period. However, there are some areas of compliance, within the provisions of the Operating Licence, which can be improved. It is noted that Hunter Water has endeavoured to implement a more formal approval/agreement process with NSW Health although, despite these efforts, evidence of a final sign off is still rather informal. NSW Health should be encouraged to be more timely and formal in its acknowledgement of approval of the documentation submitted by Hunter Water, especially in relation to approval of the Drinking Water Quality Monitoring Plan which took 17 months to approve.

## 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 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 that Hunter Water is required to undertake;
- ▶ **Clause 6.4 - Drinking Water Quality - Reporting:** This Clause specifies the drinking water quality reporting that Hunter Water is required to undertake;
- ▶ **Clause 6.5 - Drinking Water Quality - Planning:** This Clause specifies the planning measures that Hunter Water is required to meet and thereby ensure drinking water quality requirements are met in the future;
- ▶ **Clause 6.6 – Other Grades of Water:** This Clause specifies Hunter Water's obligations for the supply of '*other grades of water*'; and
- ▶ **Clause 6.7 – Environmental Water Quality:** This Clause specifies that Hunter Water must report its performance against requirements for any discharges or water releases required by its Licence.

Clause 11.2.1(b) requires IPART, or the auditor, to investigate and report on Hunter Water's compliance 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 – Licence Part 6 – Water Quality**

Clause	Requirement	Compliance	Findings
<b>6.2</b>	<b>Drinking Water Quality – Standards</b>		
6.2.1 (a)	<p>Hunter Water must comply with the following relating to Drinking water:</p> <p>(a) the Drinking water guidelines relating to Health guideline values specified by NSW Health; and</p>	Full compliance	<p>Hunter Water has consistently delivered water of a very good quality, throughout the 2006/07 period. The annual water quality report for 2006/07 was published in September 2007 and shows that Hunter Water fully complied with the requirements of the Water Quality Guidelines and the standards set by NSW Health.</p> <p><i>Escherichia coli</i> is a type of Thermotolerant Coliform bacteria and is nearly always present in the gut of humans and warm-blooded animals. <i>E. coli</i> is now generally regarded as the most specific indicator of faecal contamination and therefore the more important indicator for public health. Of particular note in the report is the fact that Hunter Water achieved 99.8% (Licence Target = &gt;98%) for <i>E. coli</i> for microbiological water quality parameters.</p> <p>For Physical/Chemical water quality, the report shows that the results for all parameters were within the Guideline values.</p>
6.2.1 (b)	the Drinking water guidelines relating to Aesthetic guideline values for pH, true colour, turbidity, aluminium, iron and zinc.	Full compliance	The Water Quality report for 2006/07 shows all values for aesthetic parameters met the aesthetic guideline values.
6.2.2	<p>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.</p> <p>[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</p>	No requirement	Definitional clause only.



Clause	Requirement	Compliance	Findings
	practices required to minimise the risk of contamination by Cryptosporidium and Giardia.]		
6.2.3	<p>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).</p> <p>[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.]</p>	Full compliance	In respect of adopting the concepts of good practice for water quality management, Hunter Water advised that it references the guidance outlined in the 2004 Australian Drinking Water Guidelines (ADWG) and, with the agreement of NSW Health, has adopted these Guidelines as the model for best practice. The auditor considers this to be appropriate, as the ADWG 2004 are based on a new framework for assuring water quality that improves upon the 1996 Guidelines. Hunter Water indicated during the audit that it was continuing to implement the full framework and that this would be achieved in the coming year.
6.2.4	<p>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.</p> <p>[Note: Fact Sheet 25 of the Drinking water guidelines sets out the pH levels applicable to cement mortar lined pipes.]</p>	Full compliance	The results from the water quality monitoring indicate full compliance with the requirements.
<b>6.3</b>	<b>Drinking Water Quality – Monitoring</b>		
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 submitted its 2005/06 Water Quality Report to NSW Health on 27 September 2006 and published its 2006/07 Water Quality Report in September 2007. NSW Health advised of its acceptance of the 2006/07 report via general email dated 19 September 2007. This email stated that the reports received were acceptable to NSW Health but it was not specific as to which reports were submitted although there is a list of reports in the Hunter Water submission for approval.
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	Full compliance	The <i>Annual Water Quality Monitoring Plan</i> prepared by Hunter Water outlines the required performance monitoring and regular sampling, laboratory testing and processes. It also includes schedules that detail the parameters to be measured, frequency of sampling, historical results and the results achieved for health and aesthetic parameters for the



Clause	Requirement	Compliance	Findings
	must include:		drinking water system, as well as those relating to the Bulk Water Supply.  Hunter Water continues to rely on NATA accreditation as the only form of quality assurance for the monitoring program as a whole. The current specification for the work carried out by the laboratories and sampling providers does not specify any process or reporting requirements in relation to Quality Assurance. It is recommended that QA procedures and reporting should be a feature of future service contracts and reporting.
6.3.2 (a)	the health parameters and the aesthetic parameters for which compliance is required under clauses 6.2.1 (a) and (b); and	Full compliance	See notes at 6.3.2
6.3.2 (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.]	Full compliance	See notes at 6.3.2
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	The sampling locations and planned frequency of sampling are detailed in the Drinking Water Quality Monitoring Plan and are in accordance with the Australian Drinking Water Guidelines (2004). The Plan was submitted to NSW Health as indicated in Hunter Water's letter of 19 April 2006. NSW Health advised of its acceptance of the 2006/07 Plan via email dated 19 September 2007. This email stated that the reports received were acceptable to NSW Health but it was not specific as to which reports were submitted although there was a list of the reports referenced in Hunter Water's email to NSW Health. A concern here is that the approval of NSW Health was not received until after the implementation and completion of the requirements of the plan for the year.
6.3.4	Hunter Water must undertake Drinking water quality monitoring during this Licence as required by NSW Health.	Full compliance	The Drinking Water Quality Monitoring Plan for 2006/07 was implemented. Consideration should be given for the inclusion of a more formal QA component for monitoring and a requirement for QA reporting. The QA process for the transfer of data from third party laboratories to Hunter Water, as noted in the 2005/06 audit report, has now been documented
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	Full compliance	Monitoring of Water Quality at the customer's tap nearest the watermain is included within the Water Quality Monitoring Plan and was conducted as required.



Clause	Requirement	Compliance	Findings
	<p>Water service pipeline directly off a watermain, which is representative of the quality of water supplied to the Customer or Consumer.</p> <p>[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.]</p>		
<b>6.4</b>	<b>Drinking Water Quality – Reporting</b>		
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.	High compliance	The results of the Drinking Water Quality Monitoring were not available on the Website at the time of the audit as a result of Hunter Water undertaking a rebuild of their website. At the time of audit, some historical reporting was available and it was anticipated that the new site would be operational in regard to Water Quality reporting by the end of September 2007. The delays in having the material available on the web site were a result of a protracted handover of the internet management component by the contractor.
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	A copy of the Annual Water Quality Report, published in September 2007, was made available to the auditor. The report compares the results of the monitoring against the Australian Drinking Water Guideline (2004) requirements. It also outlines the requirements and performance against both Health and Aesthetic guideline values for which compliance is required. NSW health advised of its acceptance of the 2006/07 report via email dated 19 September 2007. This email stated that the reports received were acceptable to NSW Health but was not specific as to which reports were submitted although there is a list of reports in the Hunter Water emailed request for approval.
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.	Full compliance	<p>Drinking Water supplied by Hunter Water is of a consistently high quality and complied with the Australian Drinking Water Guidelines during the year.</p> <p>The Annual Water Quality Report does not outline or discuss the monitoring procedure and rationale for <i>Cryptosporidium</i> or <i>Giardia</i>. The Report provides details on the Health and Aesthetic Guideline values for which compliance is required. It also compares actual Drinking Water Quality against the requirements of the guidelines.</p>
6.4.4	The Annual Water Quality Report must be prepared by 30 November each year, unless otherwise agreed, and	Full compliance	The Annual Water Quality Report for 2006/07 was published and provided to IPART in September 2007. It will also be available on the Hunter Water website once the new



Clause	Requirement	Compliance	Findings
	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.		website is completed and through its offices, free of charge.
<b>6.5</b>	<b>Drinking Water Quality – Planning</b>		
6.5.1	<p>Hunter Water must maintain, to the satisfaction of NSW Health, a Five-Year Water Quality Management Plan.</p> <p>[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]</p>	Full compliance	A <i>Five-year Water Quality Management Plan</i> for the period 2006 to 2010 was provided to the Auditor although a publication date is not evident. The Plan was submitted to NSW Health in December 2005.
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.	Full compliance	The <i>Five-Year Water Quality Management Plan 2006 – 2010</i> includes comprehensive strategies for water quality management. It also adopts the multi-barrier approach to the protection of water quality as required.
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.	No requirement	An <i>Annual Water Quality Improvement Plan for 2007/08</i> was published (not dated) and provided to the auditor.



Clause	Requirement	Compliance	Findings
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	The <i>Annual Water Quality Improvement Plan</i> outlines strategies to address issues raised in the Water Quality Monitoring program as well as matters raised in the risk assessment.
6.5.5	<p>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.</p> <p>[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.]</p>	No requirement	No review of the Licence was conducted during the period covered by this audit.
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	A copy of the 2004 and 2006 (published in April 2007) Drinking Water Risk Assessments were provided to the Auditor.
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.	High compliance	A copy of Hunter Water's <i>Crisis and Emergency Management Handbook</i> dated May 2007 was provided to the auditor. There was not, however, any evidence of acceptance by NSW Health of the approach outlined in the Handbook. There was no evidence of approval by NSW Health for the Incident Management Plan
6.5.8	<p>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.</p> <p>[Note: The requirement for a Comprehensive Incident</p>	Full compliance	The <i>Crisis and Emergency Management Handbook</i> published by Hunter Water in May 2007 contains detailed plans (see section 6.5.7) for the management of incidents and their escalation. Included in the Handbook are outlines of the responsibilities and requirements for all roles in the management of an incident. The Handbook gives an example of a water quality incident and a brief indication of the causes for escalation. Contact details for NSW Health are included in the Handbook. A trail incident was conducted in April 2007 and involved NSW Health.



Clause	Requirement	Compliance	Findings
	Management Plan is also found in the Memorandum of understanding between NSW Health and Hunter Water, July 1999.]		
<b>6.6</b>	<b>Other Grades of Water</b>		
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 both reclaimed water and chlorinated raw water to a range of customers. The arrangements for the supply of these waters are detailed within separate agreements with each of the customers supplied. These supply arrangements are consistent with the requirements of the relevant NSW 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.	No requirement	Definitional clause only
6.6.3	<p>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.</p> <p>The terms of the arrangements must at minimum include:</p> <ul style="list-style-type: none"> <li>(a) the standard of the quality of the water supplied;</li> <li>(b) the purpose of the supply;</li> <li>(c) the continuity of the water supplied; and</li> <li>(d) the costs to be paid by Customers for the supply of water to them.</li> </ul>	Full compliance	Hunter Water has in place individual supply agreements with each customer that cover all the required terms
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 includes the required terms within the individual supply agreements with each customer.



Clause	Requirement	Compliance	Findings
<b>6.7</b>	<b>Environmental Water Quality</b>		
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 is required to report all water quality monitoring results in the annual Water Licence Report and to report any non-compliance with guideline levels to DWE as soon as practical.</p> <p>Hunter Water has reported its performance in regard to effluent discharges, sewage overflows and environmental flows to DECC.</p> <p>Two licensed discharge points, the Farley and Branxton Wastewater Treatment Works, exceeded their licence criteria during this reporting period. Farley exceeded the load limit for Biological Oxygen Demand (BOD), while Branxton exceeded the limits for BOD and for Total Suspended Solids (TSS).</p> <p>The exceedances were reported through the Annual Licence Returns for each of these sites.</p> <p>Hunter Water is required to regularly monitor groundwater quality for pH, electrical conductivity, and metals in the Tomago and Tomaree groundwater sources. Hunter Water is also required to monitor surface water at several locations in the Williams and Chichester Rivers where their operations have the potential to impact water quality. Monitoring requirements include cyanobacterial levels and physico-chemical parameters (e.g. dissolved oxygen and temperature) in Chichester Dam and downstream and in Seaham Weir Pool.</p> <p>Quarterly water quality sampling in the Chichester River downstream of Chichester Dam wall was not undertaken for the period. Hunter Water has rectified this situation and is now conducting monitoring as required. Hunter Water has established a new monitoring and compliance system.</p>

## 6.4 Discussion

### 6.4.1 Drinking Water Quality – Standards

The quality of drinking water supplied to customers during the period of this audit was of a very high to excellent standard and complies with the requirements of the *Australian Drinking Water Guidelines* (2004) and the Aesthetic related requirements of NSW Health.

### 6.4.2 Drinking Water Quality – Monitoring

Hunter Water achieved full compliance for this section of its Operating Licence. However, there were some aspects of the monitoring process that should be reviewed with consideration to improvements in the area of Quality Assurance and Quality Control. Quality Assurance (QA) is a major requirement of monitoring programs. At the present time, the monitoring plans that Hunter Water has in place rely on NATA Accreditation as the means by which the sampling and analytical methods are quality assured. While accreditation is necessary, and is indeed a mandatory requirement, it represents the absolute minimum in regards to monitoring programs of this nature. Future plans should include a specific QA component and requirements for reporting that cover all aspects of the sampling, analyses, data management and reporting activities.

An additional concern in this area was the time taken for approval of the Monitoring Plan by NSW Health. The plan was submitted in April 2006 and covered the year ahead. Approval of the plan was not received until September 2007 after the plan had been implemented and completed. NSW Health needs to be encouraged to be more formal and timely in its review and approval of such plans.

### 6.4.3 Drinking Water Quality – Reporting

Hunter Water met the requirements for the reporting of drinking water quality in terms of preparation, publication and availability of the required reports. Approval of the *Water Quality Improvement Plan* and the *Incident Management Plan* by NSW Health was, however, not documented. The auditor was provided with both documents but there was no evidence of approval or agreement by NSW Health.

There was one Water Quality incident reported to NSW Health during the course of the period of review. This incident involved the dosing equipment for fluoride and resulted in a short period where higher concentrations of fluoride than normal occurred in a small part of the supply system. NSW Health were notified and confirmed that there was no significant health risk to the public as a consequence of this event.

### 6.4.4 Drinking Water Quality - Planning.

The *Five-Year Water Quality Management Plan* and *Annual Water Quality Improvement Plan* were prepared as required by the Operating Licence.

A Drinking Water Risk Assessment was completed during the audit period. As required by the Operating Licence, this is the second Risk Assessment to be completed within the Licence period.

The *Five-Year Water Quality Management Plan* has a sound basis and adopts a multi-barrier approach to the management and delivery of good water quality to its customers, as required by the Operating Licence.

#### **6.4.5 Other Grades of Water**

Hunter Water complied fully with the Operating Licence requirements with regard to the supply of other grades of water.

The Department of Water and Energy (DWE) has no requirement for Hunter Water to meet any water quality guidelines for other grades of water. DWE considers that Hunter Water should be required by the Operating Licence to publicly report on the quality of other grades of water, as Hunter Water is required to report on the quality of drinking water. It is the auditor's view that this is impractical. Hunter Water can and will likely enter into agreements with a range of customers for the supply of water of a different quality. These arrangements will be the subject of separate contractual arrangements and include, for example, the supply of untreated raw water on the one hand, to the supply of various qualities of treated sewage effluent on the other. If there was to be a change to the licence requirement it should only be to keep a register of the contracts and perhaps make that register available to DWE.

#### **6.4.6 Environmental Water Quality**

Hunter Water has complied with the Operating Licence requirements for Environmental Water Quality in reporting its performance against any environmental water quality requirements for any discharges or water releases required by Licenses issued to it.

Hunter Water has 13 licensed discharge points, all of which are subject to reporting through the Annual Licence Return. Additional reportable discharges include non-licensed discharges and significant changes in process performance.

Two licensed discharge points, the Farley and Branxton Wastewater Treatment Works (WWTW), exceeded their licence criteria during this reporting period. Farley exceeded the load limit for Biological Oxygen Demand (BOD), while Branxton exceeded the limits for BOD and for Total Suspended Solids (TSS). Copies of the Annual Returns for these two sites, and for the 11 compliant sites, were sighted.

Hunter Water stated that these two locations have failed each year since their EPLs were introduced. HWC is in discussions with DECC regarding the limits set within these licences. Hunter Water also provided a discussion paper that was presented to DECC, which described methods for setting load limits at Hunter Water's wastewater treatment works.

Water quality sampling and analysis is under contract to a NATA certified laboratory. QA samples are collected and stored as a backup. These QA samples are analysed if the original sample shows any discrepancy against licence limits.

## **6.5 Factors Affecting Compliance**

There were no external factors that directly impacted the level of compliance by Hunter Water with the Water Quality Sections of its Operating Licence. However, as a result of delays in completion of revision of its Web page, a number of documents that are required to be placed on the Web remain outstanding. The cause of this was a protracted handover of the web management system by the contractor.

## **6.6 Recommendations**

### **6.6.1 Key Recommendations**

It is recommended that Hunter Water:

- R6.1            Develop a Quality Assurance (QA) section for the Water Quality Monitoring Plan, which should also include provisions for the reporting of QA performance.
- R6.2            Endeavour to ensure that approval of NSW Health is received in regard to Monitoring Plans before they are implemented.

### **6.6.2 Secondary Recommendations**

It is further recommended that Hunter Water:

- R6.3            Resolve the issues relating to timeliness of review and approval of documents submitted to NSW Health.
- R6.4            Resolve with DECC over the next year the most appropriate way to address the licence exceedances at Branxton and Farley WWTW.

## 7. System Performance

### 7.1 Summary of Findings

#### ► Interpretation

Hunter Water achieved **Full compliance** with its implementation of the definitions and interpretations in the Licence.

#### ► System Performance Standards

Hunter Water achieved **High compliance** with the requirement that no more than 14,000 properties in a financial year should 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. Hunter Water reported 15,392 properties that experienced one or more water interruptions. While this figure is a significant increase from 2005/06 (13,133 properties), this result was impacted by the force-majeure event of the June storm. Hunter Water reported that exclusion of the June 2007 storm event reduces the affected property count to 9,835 properties. There was a significant reduction in customer service interruptions caused by planned outages due to the successful implementation of interruption minimisation strategies. Hunter Water's performance in the emergency management of the June storm event and the consequent business continuity and recovery efforts leads the auditor to recommend that the Minister consider officially commending Hunter Water, its staff and contractors for their performance.

Hunter Water achieved **Full compliance** with the requirement that no more than 4,800 properties in a financial year should experience one or more pressure incidents i.e. an event where the water pressure to a property falls below 20 metres head. Hunter Water reported 1,655 properties experiencing one or more water pressure incidents. This figure is similar to the result reported for 2004/05 and 2005/06.

Hunter Water achieved **Full compliance** with the requirement that the number of uncontrolled sewage overflows (other than on public land) in a financial year should not exceed 6,500. In 2006/07, there were 4,158 uncontrolled sewage overflows onto private property. While this is within the required standard, it is a continuation of the deteriorating trend of the last five years and it is recommended that Hunter Water take action to reverse this trend.

#### ► Reporting on System Performance Standards

Hunter Water achieved **Full compliance** for reporting on system performance.

Hunter Water obtained **High compliance** for making system performance reports publicly available. It is recommended that Hunter Water upgrade availability of its year-end reporting against its system performance standards.

#### ► System Performance Indicators

Hunter Water achieved **Full compliance** for reporting on system performance indicators.

#### ► Keep records on Water interruptions, low pressure and Sewage overflows.

Hunter Water achieved **Full compliance** for maintaining records of its system performance standard and indicator performance.

#### ► Report on low pressure areas

There was **No requirement** for reporting on low pressure areas.

#### ► Ministerial requirements

Hunter Water achieved **Full compliance** for meeting Ministerial Requirements.

## 7.2 Summary of Requirements

Part 7 of the Licence specifies requirements relating to System Performance. The key requirements are:

**Clause 7.1 – Definition:** This clause specifies the interpretation applying to specific terms used in Part 7 System Performance.

**Clause 7.2 – Interpretation:** This clause specifies the commencement and cessation times for system performance failure events.

**Clause 7.3 - System Performance Standards:** This clause defines the minimum standards of service for interruptions to customer water supply, water pressure, sewage overflows and/or other requirements determined by the Minister.

**Clause 7.4 - Reporting on System Performance:** This clause specifies the reporting requirements for system performance standards and requires Hunter Water to make the reports available to the public.

**Clause 7.5 - System Performance Indicators:** This clause specifies the reporting requirements for system performance indicators and requires Hunter Water to make the reports available to the public.

**Clause 7.6 - Keep Records on Water Interruptions, Low pressure and Sewage Overflows:** Hunter Water is required to maintain adequate data management systems for system performance data.

**Clause 7.7 - Report on Low Pressure Areas:** This clause required Hunter Water to provide a status report on low-pressure areas within six months of the creation of the Licence.

## 7.3 Ministerial Requirements

Hunter Water is required to:

- ▶ Ensure that there is improved accessibility to required system performance information in its new website;
- ▶ Train its customer service staff to improve awareness of the availability of the system performance information;
- ▶ 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 failures more quickly to both minimise the number of customers affected and repair and return the main to service (MR7.1);
- ▶ Increase the awareness of its work crews to the importance of endeavouring to reconnect customers within five hours of a discontinuity event (2004/05 MR7.2);
- ▶ 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 requirements; and
- ▶ Review its systems/ procedures/ practices/ contingency plans to allow it 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.

## 7.4 Details of Compliance

**Table 7-1 Licence Part 7 – System Performance**

Clause	Requirement	Compliance	Findings
7.2	<b>Interpretation</b>		
<b>Commencement and Cessation of a Water Interruption</b>			
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> <ul style="list-style-type: none"> <li>▶ 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;</li> <li>▶ the time that, having regard to all the circumstances, Hunter Water ought reasonably to have become aware of a Water interruption;</li> <li>▶ 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</li> <li>▶ the time that Hunter Water is informed of a Water interruption by a person.</li> </ul> <p>(b) In the case of a Planned water interruption, at the time that the water is interrupted for work that</p>	Full compliance	An appropriate operational interpretation of this definition was applied by Hunter Water.

Clause	Requirement	Compliance	Findings
	<p>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>		
<b>Commencement and Cessation of a Pressure Incident</b>			
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>	Full compliance	An appropriate operational interpretation of this definition was applied by Hunter Water.
<b>Commencement and Cessation of Sewage Overflows</b>			
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>	Full compliance	An appropriate operational interpretation of this definition was applied by Hunter Water.
<b>7.3 System Performance Standards</b>			
<b>Water Continuity Standard</b>			
7.3.1	<p>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.</p>	High compliance	<p>Hunter Water reported 15,392 properties experience one or more water interruptions resulting in a cumulative duration of 5 hours or more during 2006/07. This figure is an increase from the 2005/06 audit where the figure was 13,133. The non-compliance was a result of the major storm event in June 2007 which caused major flooding and power outages throughout the Hunter Region. Before the force majeure event, Hunter Water was well below the system performance target, a result of the recent changes to the preventive maintenance practices. The Licence figure excluding the effect of the storm is</p>

Clause	Requirement	Compliance	Findings
			9,835 ie approximately 5,557 properties experienced interruption > 5hrs as a result of the storm. A recommendation to the Minister is that Hunter Water and its staff be commended for their performance in this crisis.
<b>Water Pressure Standard</b>			
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"> <li>(a) a Water interruption;</li> <li>(b) water usage by authorised fire authorities in the case of a fire; or</li> <li>(c) operational problems (including breaks in a main or a failure of a pump) that are temporary and short-term in nature.</li> </ul>	Full compliance	<p>Hunter Water reported 1,655 properties that experienced one or more water pressure incidents below 20 metres head at the point of connection of the Property to Hunter Water's main. This figure is similar to the number affected in both 2004/05 and 2005/06.</p> <p>Processes are in place to ensure accuracy of the data and there are regular quality assurance checks.</p> <p>Low pressure is verified by modelling, pressure monitors and hydraulic models. After low pressure areas are investigated, remedial actions may be implemented such as systems can be amplified, rezoned, or pump control parameters adjusted.</p>
<b>Sewage Overflows Standard</b>			
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	<p>In 2006/07 there were 4,158 uncontrolled sewage overflows onto private property (other than on public land). This is more than the number for the 2005/06 reporting period, when 3,359 properties were recorded.</p> <p>The adjusted figure for sewage overflows after allowing for the effect of the June 2007 storm event was 3,895, ie. 263 events were directly attributable to the storm.</p> <p>Hunter Water has a critical sewer program and targeted inspection of critical</p>

Clause	Requirement	Compliance	Findings
			areas with CCTV. If there is a problem, usually rehabilitation occurs.
<b>7.4 Reporting on System Performance</b>			
<b>Reporting on Water Interruptions</b>			
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	Hunter Water reported to the Minister in the System Performance Report (August 2007).
<b>Reporting on Water Pressure</b>			
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 reported to the Minister in the System Performance Report (August 2007).
<b>Reporting on Sewage Overflows</b>			
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 reported to the Minister in the System Performance Report (August 2007).
<b>Publication of Reports</b>			
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.	High compliance	The report is available on the website as a dynamically updated report showing monthly performance and year to date. Unfortunately, there is no adequate permanent record of end of year performance easily accessible.  Customer service staff are aware of the reporting and the availability of such publications.

<b>Clause</b>	<b>Requirement</b>	<b>Compliance</b>	<b>Findings</b>
<b>7.5</b>	<b>System Performance Indicators</b>		
7.5.1	Schedule 4 applies.	Full compliance	Hunter Water reported as per the Schedule
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	<p>The report is available on the website as a dynamically updated report showing monthly performance and year to date.</p> <p>The report is made available at Hunter Water's premises for access or collection by any member of the public. Customer service staff are aware of the report and the availability of such publications</p>
<b>7.6</b>	<b>Keeping of Records on Water Interruptions, Low Pressure and Sewage Overflows</b>		
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	Records are maintained and updated regularly and appropriate backup and contingency plans are incorporated into processes and practices, for example, via the Hunter Water IT Business Continuity Plan.
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	The auditor viewed records demonstrating compliance with this obligation.
<b>7.7</b>	<b>Report on Low Pressure Areas</b>		
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:	No requirement	Completed in a previous audit period.

Clause	Requirement	Compliance	Findings
	<p>(a) the Suburbs or part thereof in which this is experienced on a consistent and systemic basis;</p> <p>(b) the number of Properties affected in each Suburb or part thereof;</p> <p>(c) the range of pressure and average pressure received by the Properties affected in each Suburb or part thereof; and</p> <p>(d) an analysis of the reasons for low pressure in each Suburb or part thereof, and options for rectification of the low pressure.</p>		
<b>Ministerial Requirements 2003-04</b>			
	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 requirements	Full compliance	Hunter Water has continued to review its maintenance/operational practices throughout 2006/07 with future plans to minimise impacts.
	<p>Review its systems/ procedures/ practices/ contingency plans to allow Hunter Water to respond more quickly to:</p> <ul style="list-style-type: none"> <li>▶ Locate failures/bursts, particularly for its trunk mains</li> <li>▶ Minimise the number of customers affected by the failure by shutting down the trunk main and/or supplying customers from other sources</li> <li>▶ Repair the failure/burst</li> <li>▶ Return the trunk main to service, resupplying customers affected</li> </ul>	Full compliance	<p>Hunter Water has continued to review its systems/procedures/ practices/contingency plans in 2006/07.</p> <p>It is clear from the response to the June 2007 storm event that Hunter Water's development and implementation of its emergency and contingency plans is very effective.</p>

Clause	Requirement	Compliance	Findings
<b>Ministerial Requirements 2004-05</b>			
	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 failures more quickly to both minimise the number of customers affected and repair and return the main to service.	No requirement	This installation program has become an integral part of Hunter Water's processes and practices for future capital works.
	Increase the awareness of its work crews as to the importance of endeavouring to reconnect customers within five hours of a discontinuity event.	Full compliance	Hunter Water has monthly informal training through the use of toolbox talks and regular training for crews (including contract crews). The toolbox talks have an emphasis on water continuity with regular incident reporting. In these meetings there are debriefs of major incidents of discontinuity and pre planning of planned shutdowns to ensure minimal shutdown durations. Procedures for reservoir cleaning are regularly reviewed.
<b>Ministerial Requirements 2005-06</b>			
	Hunter Water ensure that there is improved accessibility to required system performance information in its new website	Full compliance	Hunter Water has located the System Performance information under the Reports and Plans section of the website.
	Hunter Water train its customer service staff to improve awareness of the availability of the system performance information.	Full compliance	Hunter Water customer service staff are aware of the availability of the system performance information.

## 7.5 Discussion

### 7.5.1 General Processes for Measurement, Reporting and Ensuring Compliance

This is a general discussion of Hunter Water's processes for measurement, reporting and ensuring compliance, as they are common to all the System Performance Standards. For System Performance Standards, the audit generally covered the aspects listed in [Table 7-2](#). Items 1 to 4 are discussed below as they apply to all System Performance Standards, while Items 4 (where the issue is specific to an individual Standard), 5 and 6 are discussed separately for each Standard or Indicator.

**Table 7-2 Aspects Covered by the Audit for the System Performance Standards**

<ol style="list-style-type: none"><li>1. Interpretation and application of the standards.</li><li>2. Existence of appropriate procedures, documentation and data collection, and reporting systems for the amended standards.</li><li>3. Compliance of Hunter Water with procedures and requirements.</li><li>4. A subjective evaluation by the auditor of the processes and procedures in place for identifying, assessing and recording events.</li><li>5. Analysis of performance compared to the standard and to historical performance where possible and relevant.</li><li>6. Strategies, plans and programs in place to ensure compliance with each standard is maintained in the future.</li></ol>
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#### Interpretation and Application of the Standards

Hunter Water's definition and interpretation of the standards are generally consistent with the Minister's requirements as expressed in the Minister's Notice of Amended Performance Standards.

#### Procedures, Documentation and Data Collection, and Reporting Systems

Hunter Water has maintained extensive documentation for the collecting, collating and reporting of data for service standards under its Operating Licence Monitoring and Reporting System (M&R).

#### Compliance of Hunter Water with Procedures and Requirements

Overall, Hunter Water provided a wide range of evidence with effective and succinct data reporting in response to the auditor's questions. Hunter Water provided the auditor with additional evidence and clarifications in a timely manner.

Documentation provided was presented in an organised manner, defined processes and procedures and provided evidence of compliance specifications for the various indicators.

Staff training documentation was considered and evidence exists that training is regularly updated.

Information systems and records were regularly updated and quality assured/audited by Hunter Water.

### **Accuracy and Confidence Limits of Reported Numbers**

Hunter Water's data collection processes for field activities enable a high degree of accuracy in reporting. As soon as a field crew finish a job they call the customer service officers who enter the data and any issues or queries are immediately clarified. This enhances accuracy by eliminating transcription errors from manually recorded field notes to computerised systems.

IPART and Hunter Water reached an agreement that Hunter Water does not have to undertake auditing for accuracy and confidence of the System Performance Standards for the 2006/07 year.

## **7.5.2 Drinking Water Pressure**

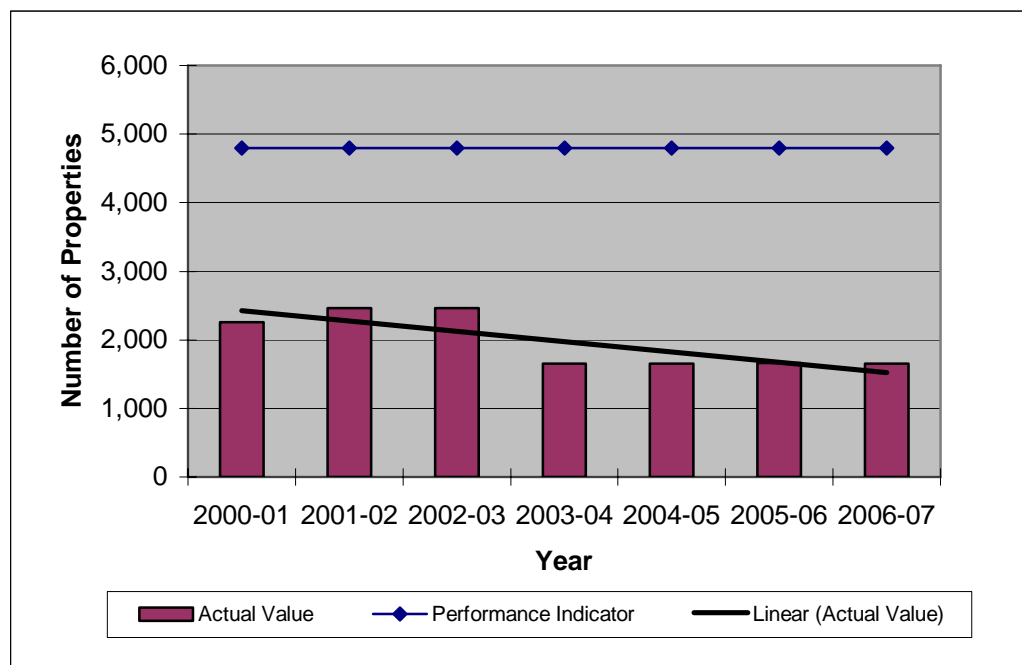
### **Reported Compliance and Historical Trend Comparison**

Comparison with data from previous years (see [Table 7-3](#)) indicates that properties affected by low pressure have decreased significantly since 2000-01, when 2,709 properties were affected. [Figure 7-1](#) shows a decreasing trend but for the period of 2003-04 to 2006-07 there has been a stabilisation of properties affected by low pressure.

**Table 7-3 Water Pressure (Historical Comparison)**

Indicator	Licence Standard	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
No more than 4,800 Properties in a financial year experience one or more pressure incidents.	4,800	2,256	2,461	2,461	1,655	1,656	1,663	1,655

**Figure 7-1 Water Pressure (Historical Comparison)**



### Accuracy and Confidence Assessment

Hunter Water provided evidence demonstrating the accuracy and confidence of its reporting, including:

- ▶ Job Cards;
- ▶ Internal audit evidence;
- ▶ Training Manuals;
- ▶ Historical Records of Low Pressure;
- ▶ Cumulative Properties Affected by Low Pressure;
- ▶ Letters to the Minister;
- ▶ Training Records;
- ▶ Methods of Calculation and Reporting;
- ▶ IT Business Continuity Plan; and

Processes are in place to ensure accuracy and there are regular quality assurance checks. Hunter Water has regular reporting with monthly, quarterly and annual reports.

Considering the procedures, documentation and systems in place, and the information provided by Hunter Water, the auditor is satisfied that Hunter Water's reported results are sufficiently robust.

### Strategies, Plans and Programs to Ensure Compliance

Hunter Water provided adequate evidence of regular training for staff, with regular quality assurance audits to should ensure compliance with the Operating Licence.

### Summary

Hunter Water fully complies with the standard requirement for not more than 4,800 properties affected by a water pressure incident where the water pressure to a property

falls below 20 metres, at the point of connection of the property to Hunter Water's main. Since 2003/04, this figure has been relatively stable and significantly below the standard.

### 7.5.3 Drinking Water Continuity (Unplanned and "Planned and Warned")

#### Reported Compliance and Historical Trend Comparison

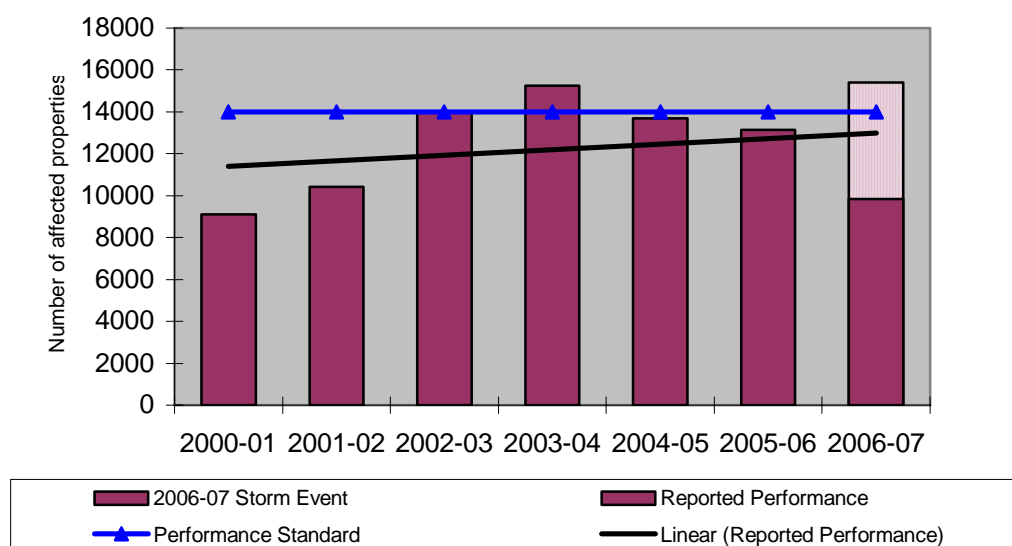
Historical comparison of Hunter Water performance indicates 9,835 properties affected in 2006/07 (excluding the June storm event) and 15,392 including the storm event (Table 7-4). Ignoring the storm event, while the overall linear trend is still upwards over the whole range (Figure 7-2) the slope is much reduced and the shorter trend since the peak in 2003/04 shows a significant reduction in properties affected.

Growth in connections since 2002 has made the 14,000 standard challenging, but with a range of operating initiatives implemented over the last five years, Hunter Water has been able to achieve a significant decrease in properties affected. In particular, in 2006/07 this was achieved by a significant improvement in management of customer interruption of service during planned outages.

**Table 7-4 Water Continuity (Historical Comparison)**

Indicators	Licence Standard	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
No more than 14,000 properties in a financial year experience one or more water interruptions with a cumulative duration exceeding 5 hours.	14,000	9,094	10,410	13,966	15,248	13,696	13,133	9,835 (excl. storm event) 15,392 (incl. storm event)

**Figure 7-2 Water Continuity (Historical Comparison)**



### Accuracy and Confidence Assessment

Hunter Water provided evidence demonstrating the accuracy and confidence of its reporting, including:

- ▶ Letters to the Minister;
- ▶ Internal audit evidence;
- ▶ Training Manuals;
- ▶ Training Records;
- ▶ Internal audit evidence;
- ▶ Benchmarking of water losses;
- ▶ Jobs with changed priority;
- ▶ Historical Records of Water Discontinuity;
- ▶ Methods of Calculation and Reporting; and
- ▶ SCADA System Upgrade Documents.

Hunter Water has processes in place to ensure accuracy and consistency through regular training and auditing.

Hunter Water provided data on jobs with changed priority, however Hunter Water has no procedure for managing reporting when a priority is upgraded. This may result in reporting inaccuracy.

Considering the procedures, documentation and systems in place, and the information provided by Hunter Water, the auditor is satisfied that Hunter Water's reported results are sufficiently robust.

### Strategies, Plans and Programs to Ensure Compliance

In order to stay below the 14,000 properties accumulating more than 5 hours of interruption to water supply, Hunter Water has implemented a range of initiatives to improve water supply continuity. Such measures are discussed in Section 7.5.5.

## Summary

While Hunter Water technically failed to fully comply with the standard in 2006/07, which requires no more than 14,000 properties affected by a water supply continuity interruption (whether planned or unplanned) with a cumulative duration of more than 5 hours, it is clear that this was a result of the force majeure June storm event. Without this event, Hunter Water would most likely have achieved its second best result over the period considered.

The measurement and reporting of the standard is reasonably reliable and adequate systems are in place to ensure that the amended standard is maintained in the short term. The result was achieved through better management of the customer interruptions due to planned outages and evidence was also supplied of a more robust asset management strategy outlining and justifying options for minimising customer interruptions in the medium to longer term.

### 7.5.4 Sewage Overflows

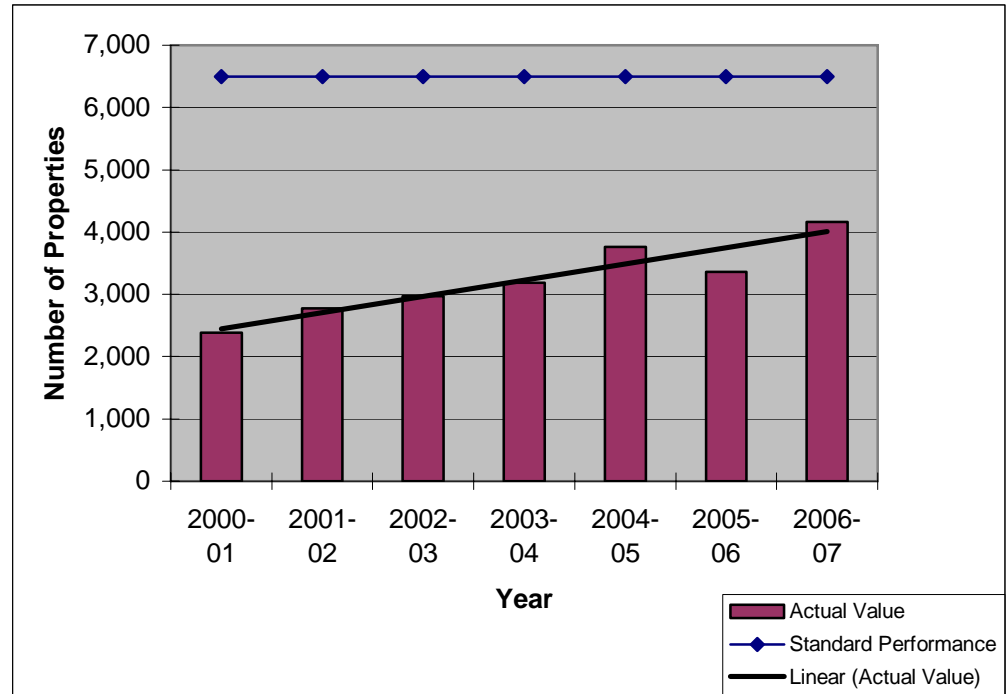
#### Reported Compliance and Historical Trend Comparison

Comparison of 2006/07 results with previous performance ([Table 7-5](#)) indicates that 2006/07 performance continued the deteriorating trend of previous years ([Figure 7-3](#)). Hunter Water notes the adjusted figure for sewage overflows after allowing for the effect of the June 2007 storm event was 3,895, ie. 263 events were directly attributable to the storm. The slope of the trendline indicates a trend in excess of the growth in property numbers.

**Table 7-5 Sewage Overflows (Historical Comparison)**

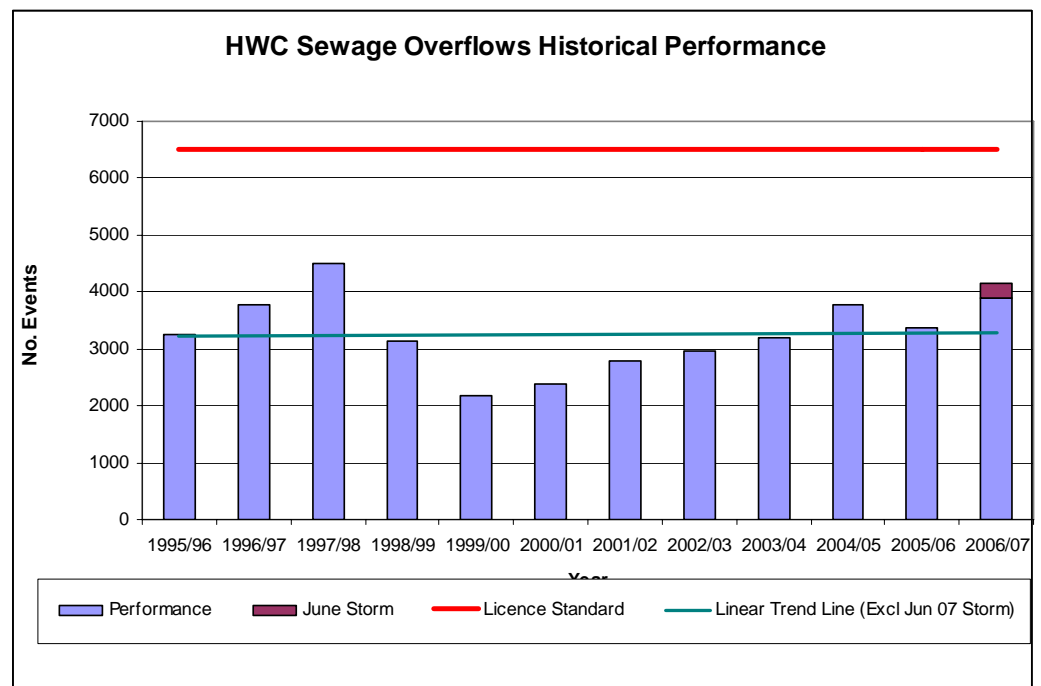
Indicators	Licence Standard	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Number of uncontrolled sewage overflows in a financial year (other than public land) does not exceed 6,500	6,500	2,381	2,775	2,966	3,190	3,763	3,359	4,158

**Figure 7-3 Sewer Overflows (7 year Historical Comparison)**



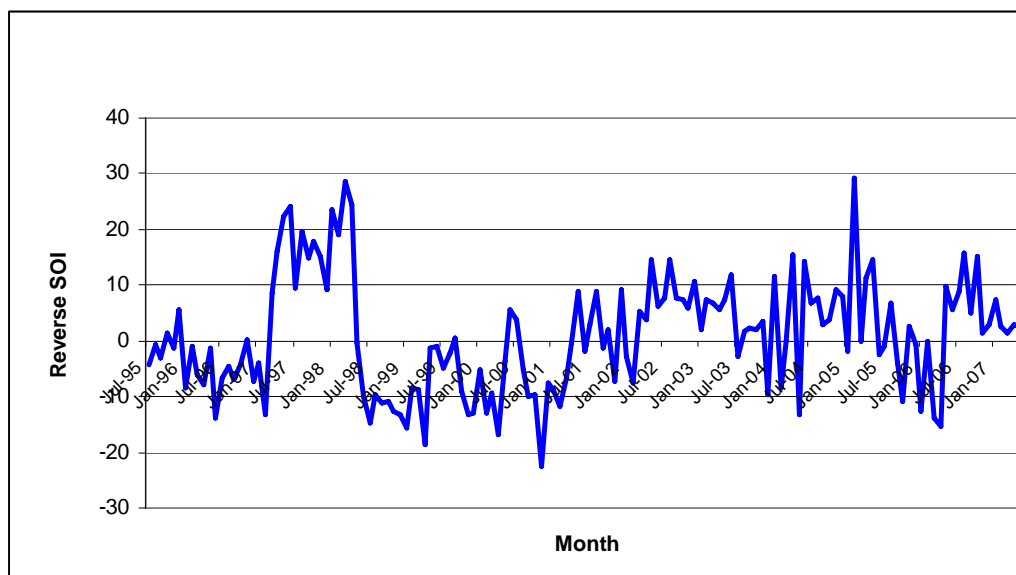
[Figure 7-3](#) indicates an increasing trend, however twelve-year historical data from Hunter Water indicates a horizontal trend line ([Figure 7-4](#)).

**Figure 7-4 Sewer Overflows (12 year Historical Comparison)**



This twelve-year sewage overflow historical trend correlates strongly with the twelve-year weather patterns reflected in the leading indicator of the Reverse Southern Oscillation Index<sup>1</sup> (RSOI) (i.e the inverse of the SOI value). Approximately 80% of the sewage overflows are caused by blockages or chokes caused by tree roots actively seeking moisture and intruding into the sewerage system, Drought conditions (RSOI conditions) causes more tree root intrusions and the recent increase in sewage overflows correlates with the SOI results.

**Figure 7-5 Reverse Southern Oscillation Index (RSOI) (12 year Historical Comparison)**



<sup>1</sup> The RSOI value is a leading indicator of likely level of rainfall and is calculated from monthly or seasonal fluctuations in the air pressure difference between Tahiti and Darwin. Sustained positive values of the RSOI often indicate El Niño episodes and likely drought conditions in eastern Australia. Negative values of the RSOI are associated with stronger Pacific trade winds and warmer sea temperatures to the north of Australia, popularly known as a La Niña episode and likely higher rainfall in eastern Australia.

### **Accuracy and Confidence Assessment**

Hunter Water provided evidence demonstrating the accuracy and confidence of their reporting, including:

- ▶ Jobs with changed priority;
- ▶ Internal audit evidence;
- ▶ Training Manuals;
- ▶ Details of Water Treatment plants;
- ▶ Letters to the Minister;
- ▶ Methods of Calculation and Reporting.
- ▶ Historical Records of Sewage;
- ▶ Job Cards;
- ▶ Internal audit evidence;
- ▶ Training Records;
- ▶ IT Business Continuity Plan; and

Considering the procedures, documentation and systems in place, and the information provided by Hunter Water, the auditor is satisfied that Hunter Water's reported results are sufficiently robust.

### **Strategies, Plans and Programs to Ensure Compliance**

Hunter Water has a critical sewer program for built up areas, and also targets multiple occurrences with CCTV inspection. Such inspections reveal if rehabilitation/ renewal/ replacement is needed.

Hunter Water maintains that all assets are available on the GIS system. Each asset has a unique identification number and routine reports can be created for those assets that require periodic CCTV inspections.

### **Summary**

Hunter Water fully complies with the standard of no more than 6,500 properties affected by an uncontrolled sewage overflow in a financial year (other than on public land). The short-term trend is continuing to be upward, however as Hunter Water data indicates, the longer term twelve-year sewage overflow data correlates strongly with the Southern Oscillation Index (SOI). Hunter Water are therefore confident that this more recent trend will lessen with a change in climatic conditions. Hunter Water also has strategies in place to avoid repeat events and cost effective targeted maintenance action.

In conclusion, the measurement and reporting against the standard is generally reliable and systems appear to be in place to ensure that compliance to the amended standard is maintained.

### **7.5.5 Discussion on Ministerial Requirement 2003/04**

Hunter Water provided information on the 2003/04 requirements to *'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 requirements'*.

Hunter Water's initiatives are continuing, in order to comply with the Licence requirement, and this has resulted in a decrease in the number of properties affected each year since the non-compliance in 2003/04.

For 2006/07, action included a systematic focus on minimising customer interruptions due to planned outages.

Hunter Water believes that, even with such initiatives, there could be non-compliance in the future, due to the systems vulnerability to trunk main failures and that the nature of urban development in the Hunter Region means that long lengths of single trunk mains supply many customers in outlying communities.

A further Ministerial Requirement was to: *'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's actions in responding to this requirement in both 2006/07 and in previous years has resulted in a significant improvement in reported performance.

Ministerial Requirement: *'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'.*

See Section 7.5.6 below for response.

#### **7.5.6 Discussion of Ministerial Requirements for 2004/05**

**Ministerial Requirement MR7.1 2004/05:** *'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 failures more quickly to both minimise the number of customers affected and repair and return the main to service'.*

Hunter Water has shown evidence of its upgraded SCADA system. This system means that Hunter Water now has the opportunity to implement advanced control and reporting schemes. Over the last two to three years, Hunter Water has increased its replacement schedule budget. Hunter Water has a program for condition assessments in order to proactively maintain linear polarisation resistance. There is now an accurate model to predict main break failures. Contingency plans have been drawn up to speed up response times to these events. Strategies are being implemented to increase distribution storage. Hunter Water has a model for investment based on the location of previous breaks. It manages its water mains by a reactive process. If water discontinuity is affecting the community on a regular basis then the main is replaced. Hunter Water has risk based criteria for defining priorities in condition assessment and replacement.

**Ministerial Requirement 7.2 2004/05:** *'Increase the awareness of its work crews as to the importance of endeavouring to reconnect customers within five hours of a discontinuity event'.*

Throughout 2007, Hunter Water has been monitoring performance against the water continuity Licence requirement and has arranged regular toolbox talks with field crews. The toolbox meetings have an emphasis on water continuity, with regular incident reporting and debriefs of major incidents of discontinuity, and preplanning of planned shutdowns to ensure minimal shutdown durations. Procedures for reservoir cleaning are regularly reviewed.

In addition to this, a system was set up on the Corporation's GIS that highlights, for operational controllers and dispatch staff, areas where the level of continuity is an issue. This is then used to determine whether non-shutdown work practices could be applied, even if this incurred additional cost.

There is regular training for customer service staff and crews (including contract crews).

## 7.6 System Performance Indicators

### Water

[Table 7-6](#) shows the trends in the water continuity system performance indicators for five years. Where comparable data is unavailable for previous years, the cells have been greyed out.

**Table 7-6 Trend Comparison of Water Continuity System Performance Indicators**

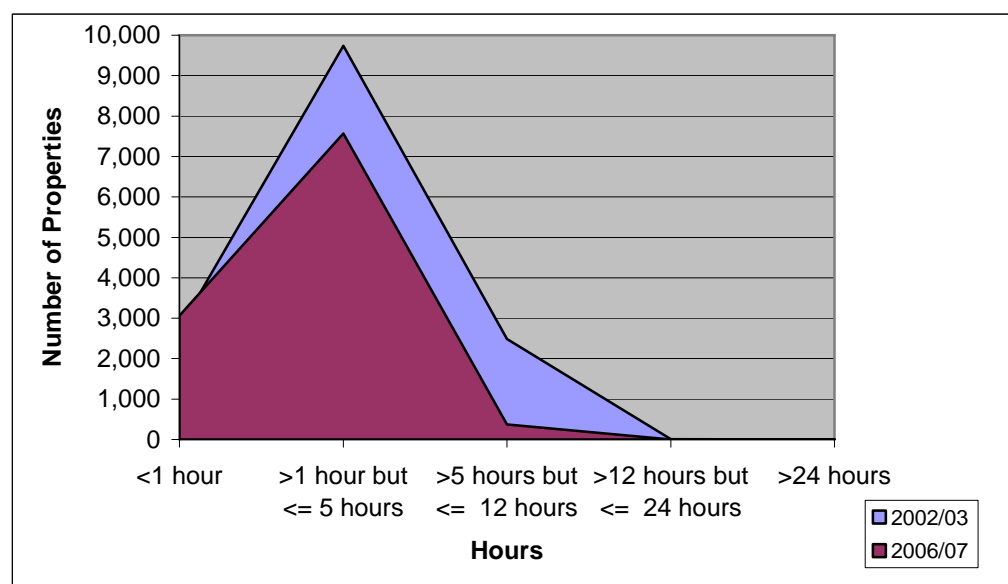
Indicators	Indicator Parameters	2002-03	2003-04	2004-05	2005-06	2006-07
Clause 1.2.1 Number of Properties affected by Planned water interruptions where the duration of the interruption is:	<1 hour	4,189	2,748	3,473	3,501	3,066
	>1 hour but ≤ 5 hours	12,502	9,741	8,738	9,224	7,571
	>5 hours but ≤ 12 hours	2,452	2,485	2,902	1,137	376
	>12 hours but ≤ 24 hours	0	9	0	0	0
	>24 hours	52	0	0	0	0
	Total interruptions	19,195	14,983	15,113	13,862	11,013
Clause 1.2.1 Number of Properties affected by Unplanned water interruptions where the duration of the	<1 hour	23,003	17,028	21,174	19,684	18,598
	>1 hour but ≤ 5 hours	52,514	51,222	55,943	55,078	50,086
	>5 hours but ≤ 12 hours	4,500	8,911	4,353	5,713	8,386

interruption is:	>12 hours but ≤ 24 hours	80	19	70	22	2,844
	>24 hours	31	0	3	6	66
	Total interruptions	80,128	77,180	81,543	80,503	79,980
Clause 1.2.2 Number of Properties affected by Water interruptions (whether a Planned or an Unplanned water interruption):	2 interruptions	13,429	12,659	13,870	14,495	14,217
	3 interruptions	5,056	4,760	4,566	4,999	3,315
	4 interruptions	1,985	1,804	1,532	2,178	1,505
	5 or more interruptions	1,661	1,202	584	939	641
	Total properties affected by multiple interruptions of any number	22,131	20,425	20,552	22,611	19,678
Clause 1.2.3 Number of Properties affected by a Planned water interruption that did not commence at the time specified in the notice.		1,681	1,762	1,852	1131	1665
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. (Presented by auditor as summary statistics)	Number of planned events	0	3	1	0	0
	Total number of properties affected by planned events	0	1,017	252	0	0
	Weighted average outage time for properties affected by planned events (hrs/property)	0	5.57	6.80	0	0
	Number of unplanned events (incl. 2007 storm event in brackets)	3	3	2	4	4 (8)
	Total number of properties affected by unplanned events (incl. 2007 storm event in brackets)	1,964	6,747	2,064	2,703	3,624 (8,525)
	Weighted average outage time for properties affected by unplanned events (hrs/property) (incl. 2007 storm event in brackets)	7.48	6.14	5.57	6.82	10.52 (9.51)

## Discussion

Since 2002/03, there has been a significant reduction in the total number of planned interruptions (and this has continued in 2006/07) and this reduction is general across the duration profile ([Figure 7-6](#)).

**Figure 7-6 Duration Profile of Planned Outages for 2002/03 and 2006/07**



The results for 2006/07 have been significantly influenced by the June 2007 storm event. Hunter Water demonstrated that until this event, it was showing significantly improved performance in all but the frequency of unplanned interruption events affecting more than 250 properties, where the interruption was longer than 5 hours. Four events occurred:

- ▶ Wangi Wangi (6.9 hours, 258 properties affected)
- ▶ Kooragang (13.5 hours, 1995 properties affected)
- ▶ Swansea (3.5 to 8.5 hours, 531 properties affected)
- ▶ Toronto (6.7-8.1 hours, 840 properties affected).

As with 2005/06, this was higher than the number of unplanned events per annum than in previous years, though it is noted that the Toronto event was due to an alternative supply source failure while the principal source was off-line for maintenance, diminishing the significance of this event from the point of view of addressing systematic improvements in Licence compliance. The weighted average outage time was also significantly impacted by one event (Kooragang) where the largest number of customers were affected for the longest duration (there is a current project to mitigate this risk due to completion by end of 2007).

The June 2007 storm event resulted in four additional unplanned interruption events affecting more than 250 properties, where the interruption was longer than 5 hours:

- ▶ Valentine (5.2 hours, 494 properties affected)
- ▶ Cardiff Heights (11.4 hours, 823 properties affected)
- ▶ Macquarie Hills (12 hours, 741 properties affected)
- ▶ Toronto (7.7 hours, 3683 properties affected).

These interruptions are considered by the auditor to be the result of a force majeure event and therefore should not be considered as failures of service requiring action by the regulator or Minister.

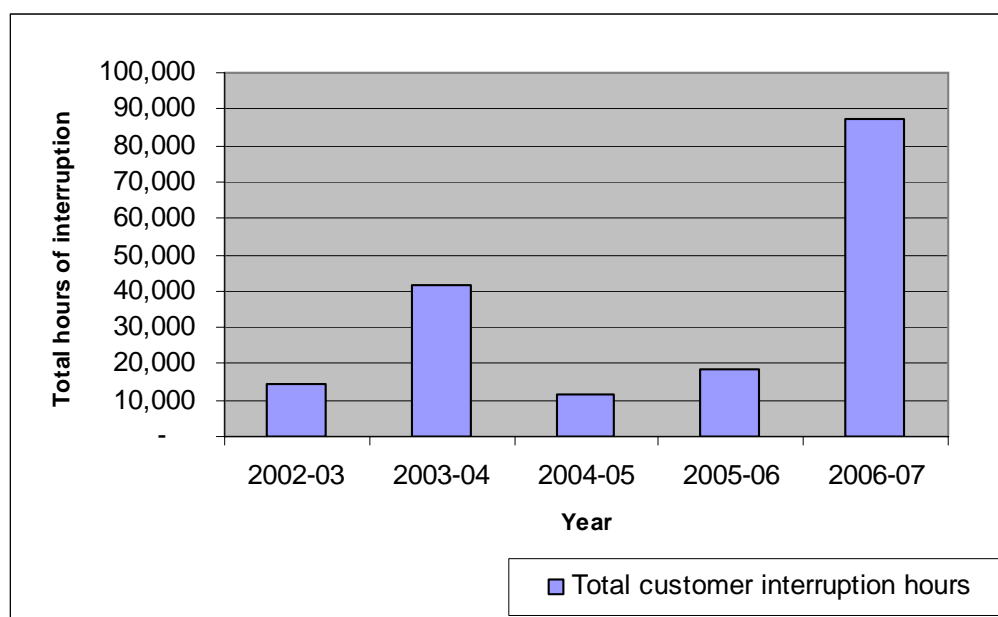
### Conclusions

Hunter Water has made improvements in operational processes and practices that have resulted in significant improvement in planned outage performance.

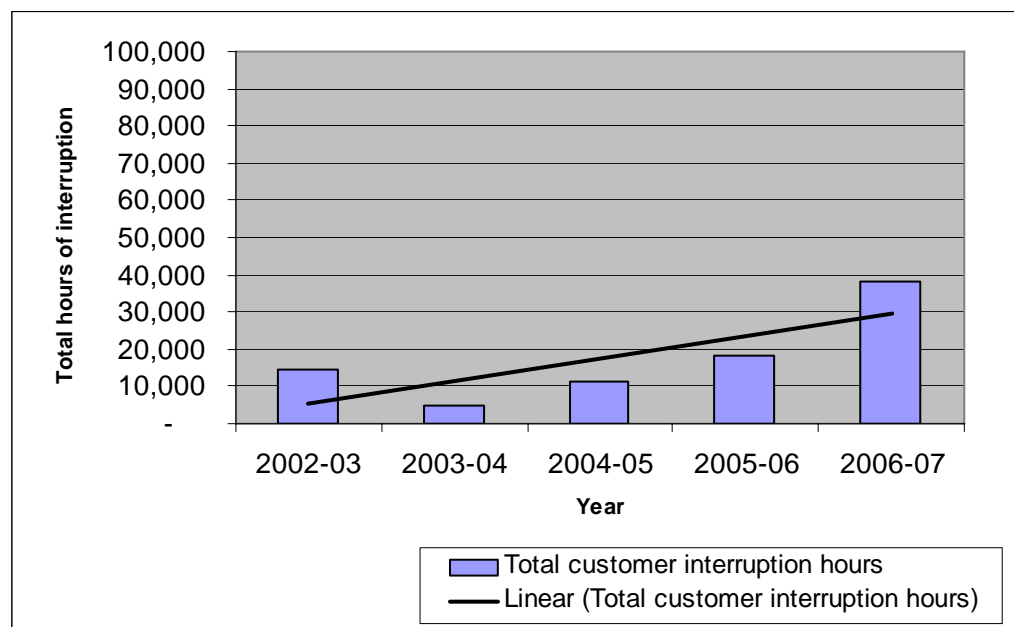
Hunter Water gave a presentation of two case studies addressing the need to improve system vulnerability to large main failures. This presentation was supported by provision of a report explaining their Critical Trunk Watermain Project. Combined, this information addressed auditor concerns from last year with regard to medium- to long-term management of the problem.

It is clear that the June 2007 storm event significantly impacted on this year's results as demonstrated by a comparison of [Figure 7-7](#) with [Figure 7-8](#).

**Figure 7-7 Total Customer Interruption Hours for 'Large' Unplanned Interruptions (unadjusted)**



**Figure 7-8 Total Customer Interruption Hours for 'Large' Unplanned Interruptions (excluding 2003/04 outlier and 2007 storm event).**



### Water Pressure

[Table 7-7](#) shows the trend in water pressure system performance indicator data for five years. Where comparable data is unavailable for previous years, the cells have been greyed out.

**Table 7-7 Trend Comparison of Water Pressure System Performance Indicator**

Indicators	2002/03	2003/04	2004/05	2005/06	2006/07
Clause 1.3.1 Number of Properties not in a low pressure area that experienced more than one Pressure incident in a financial year.	24	0	0	1	0

### Discussion

There has been no significant change in performance for 2006/07.

### Sewage Overflows

[Table 7-8](#) shows the trends in sewage overflow system performance indicator data for five years. Where comparable data is unavailable for previous years, the cells have been greyed out.

**Table 7-8 Trend Comparison of Sewage Overflow System Performance Indicators**

Indicators	Indicator Parameters	2002-03	2003-04	2004-05	2005-06	2006-07
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	1,401	1,363	1,535	1,281	1,501
	(b) A blockage in a branch pipe	1,506	1,706	1,993	1,977	2,028
	(c) Third party damage;	2	1	0	1	1
	(d) An event other than one described in (a), (b) or (c)	13	12	16	23	23
Clause 1.4.2 (a) Number of Priority 1 sewage overflows to which the Corporation responded in	< 1 hour	558	605	639	712	751
	> 1 hour	133	164	302	321	504
Clause 1.4.2 (b) Number of Priority 2 sewage overflows to which the Corporation responded in	<3 hours	3,121	3,344	3,628	3,491	3,681
	> 3 hours	659	701	990	810	1,462
Clause 1.4.3 Number of Uncontrolled sewage overflows on Public land that occurred in	dry weather	589	718	747	645	835
	wet weather.	9	14	55	17	129
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.		356	386	458	400	436
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.		28	76	109	63	104

There was a general deterioration in all sewage system performance indicators in 2006/07 over 2005/06. While the June storm event has impacted on the results, the month-by-month reported performance indicates that the deterioration in performance is not due to this reason alone. There is a need for Hunter Water to provide evidence in next year's report/audit as to the actions it is taking to reverse the trend.

## 7.7 Factors Affecting Compliance

The major storm/flooding event of 8-24 June 2007 resulted in the “worst flooding in the Hunter Valley in 52 years with many new long-term rainfall records set. There was major flooding in the Hunter River from 8th to the 13th and Paterson/Williams River from the 8th to the 10th. A Natural disaster was declared in Hunter and Central Coast<sup>2</sup>. Hunter Water indicated the actual rainfall levels experienced in various areas were in the region of 1 in 200 to 1 in 500 year return period events and provided independent evidence of rainfall levels well exceeding their design limit.

Hunter Water designs the water and sewer systems to minimise the risk of failure consequences on the community. The design events or limits used by Hunter Water are typical of those required/used by water and local government agencies in many parts of Australia. Two examples given by Hunter Water are:

- ▶ **Wastewater Pump Station Design**
  1. Wastewater pump stations are designed with the finished surface level of the well above the 1:100 year flood level, to prevent storm flooding during low to medium rainfall events, and allow continued operation (refer to the attached exert from Hunter Water’s Wastewater Pump Station Design Manual).
  2. Wastewater pump stations are designed with the electrical switchboard cabinet mounted 0.6m above the 1:100 year flood level, to prevent storm flooding during low to medium rainfall events, and allow continued operation (refer to the attached exert from Hunter Water’s Wastewater Pump Station Design Manual).

- ▶ **Sewer System Design**

Hunter Water manages the existing wastewater transportation network in accordance with the Protection of the Environment and Operations Act 1997 which was implemented in July 1999.

The POEO Act requires that Hunter Water undertake Upgrade Management Plans which investigate and determine the optimum design storm event to ensure wastewater system licences properly reflect the most cost-effective way to maximise customer and environmental benefits.

Hunter Water has completed the Newcastle, Lake Macquarie, Windale and Dudley-Charlestown Upgrade Management Plans in which it was determined the optimum design storm events are between a 1:3 month and 1:6 month storm event.

Given the events of June 2007 impacted on Licence compliance, including the failure of Hunter Water to meet its water continuity target, some time was spent during the audit reviewing Hunter Water’s response. This also provided an opportunity to review the actual performance of Hunter Water in implementing the Emergency and Business Continuity Plans that have been noted in previous Hunter Water responses to Ministerial Requirements.

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<sup>2</sup>Australian Bureau of Meteorology, Significant Weather –June 2007 report

Following a review and audit of available information, it is the auditor's opinion that the June 2007 event was a force majeure event within the context of Hunter Water's Licence compliance. Furthermore, it is recommended that the Minister consider public acknowledgement of Hunter Water's achievements.

## **7.8 Recommendations**

### **7.8.1 Key Recommendations**

It is recommended that the Minister:

- R7.1 Consider publicly commending/acknowledging Hunter Water, its staff and contractors for their planning, preparation and response to the June 2007 flood. Their performance demonstrated the highest professional standards, personal commitment and success in maintaining and restoring services to customers and ensuring public health and safety.

### **7.8.2 Secondary Recommendations**

It is recommended that Hunter Water:

- SR7.1 Ensure that there is improved accessibility to end of year reporting of its performance in meeting its system performance standards.
- SR7.2 Implement appropriate processes and practices for managing and recording changes in priority of system failure events.

## 8. Water Supply and Demand

### 8.1 Summary of Findings

#### ► Integrated Water Resources Plan

Hunter Water's Integrated Water Resources Plan (IWRP) was completed in a previous audit period and thus **No requirement** applies to many of the clauses in 2006/07. Hunter Water was assigned **Full compliance** for making the IWRP available. Future IWRPs will consider issues such as climate change and drought security, supply augmentation and opportunities for further recycling and demand management.

#### ► Water Conservation Target

**Full compliance** was assessed for achieving water conservation targets.

The actual annual demand of 206 kL/year/residential property is less than the *Water Conservation Target* of 215 kL/year/residential property. Based on the accuracy of water measurement of about  $\pm 2.7\%$ , the actual demand could be in the range 200 to 212 kL/year/residential property.

Emergency supply from Hunter Water to the Central Coast can occur subject to Hunter Water storage levels. That is, the supply agreement is based on ensuring supply to the Central Coast does not jeopardise reliability of supply to Hunter Water customers. A staged reduction of supply has been adopted based on Hunter Water storage levels. Supply to the Central Coast is treated as non-residential supply (ie. Major customer supply) and, as such, is excluded from Hunter Water's domestic water consumption target calculations. Given the Central Coast will have water restrictions whilst storage levels are low (and therefore receiving emergency supply from the Hunter), conservative use of Hunter Water's supply is assured. It is considered appropriate that this supply be excluded from Hunter Water's consumption target calculations.

#### ► Water Demand & Supply Indicators

As no water restrictions applied over 2006/07, a number of clauses were **No requirement**, while **Full compliance** was assigned for reporting on requirements relating to losses from the water system, Recycled Water use, Demand Management and water demand and supply indicators.

Hunter Water provided information on the relevant indicators of water demand and supply indicators; performance was generally good. Previous audit concerns, regarding uptake of recycled water by industry and translating water audits of industry into actual water savings, have been addressed through a detailed Recycled Water Study. This Study has identified tangible projects to form part of the 2008 IWRP major review. The proposed implementation will be reviewed once all possible programs are identified through the IWRP review process.

In addition to recycled water measures being considered by Hunter Water, *TogetherTODAY* is another initiative where Hunter Water is involved in partnership with industry to reduce potable water consumption.

Hunter Water already recycles a considerable volume of wastewater through industry, but the volume is subject to fluctuations in economic and industrial conditions beyond Hunter Water's control. The approach for targets to be set to increase recycling and decrease use of potable water within the utility's sewage treatment plants, as recommended in the 2006 Issues Paper Review of the Operating Licence, is supported. This approach has the advantage of being well within Hunter Water's control. Provision of some form of indicators of reuse rather than fixed targets in the new 2007 – 2012 Licence is consistent with this approach.

The drop off in the number of REFIT kits installed by Hunter Water over 2005/06 and 2006/07 is understood to be due to private sector competitors offering alternate kits at 'no cost' and/or lower prices. While Hunter Water will continue the REFIT program with 2,500 Department of Housing properties targeted for retrofit in 2007/08, it is recommended that details of kits installed by other providers be reported through partnership arrangements being discussed in the *TogetherTODAY* and/or other programs.

It is recommended that Hunter Water also report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future IWRP reports.

#### **Annual Reporting on Water Demand & Supply Indicators**

**Full compliance** was assessed for annual reporting on water demand and supply indicators.

The annually produced *Integrated Water Resource Plan (August 2007)* provides a good summary of Hunter Water's performance on Water and Demand indicators. The report was delivered to IPART on time.

##### ► **Ministerial Requirement**

Hunter Water achieved **Full compliance** in meeting its Ministerial Requirement for developing a summary table of water saving initiatives.

## **8.2 Summary of Requirements**

Part 8 of the Licence specifies the requirements relating to 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 it has in place to meet future water demand. The key requirements in this Part are:

- **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; and
- **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.

Clause 11.2.1(d) requires IPART, or the Auditor, to investigate and report on Hunter Water's compliance 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 Ministerial Requirements**

- ▶ Following the findings of the 2005/06 audit, the Minister endorsed IPART's recommendation that Hunter Water develop a summary table for water saving initiatives. For 2006/07, this was to identify expenditure and savings achieved for the year and key reasons for performance.

## 8.4 Details of Compliance

**Table 8-1 Licence Part 8 – Water Supply and Demand**

Clause	Requirement	Compliance	Findings
<b>8.2 - Interpretation</b>			
8.2.1	Where there is a reference to options developed under the Integrated Water resource plan, this includes an option or any combination of options	No requirement	Definition clause only.
<b>8.3 - Integrated Water Resource Plan</b>			
<b>Development of the Plan</b>			
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 with the release of the <i>Integrated Water Resources Plan</i> (IWRP) on 1 March 2003. 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	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	Full compliance was previously assessed and determined as part of the 2002/03 Audit.  The 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	Full compliance	The 2007 IWRP is available from Hunter Water's website (downloaded by Auditor on 4 September 2007) or a hardcopy can be provided on request, being free of any access charge by either method.

Clause	Requirement	Compliance	Findings
	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.	Full compliance	Hunter Water is well underway with its major review of the IWRP, a summary of which is provided in Section 9 of the 2007 IWRP. The review will be completed by June 2008 and will include results from community consultation, comprising focus groups and survey questionnaires, to guide recommendations. The main strategic issues associated with securing Hunter Water's future are outlined in the August 2007 paper titled <i>"Why Tillegra Now?"</i>
8.3.6	Hunter Water must report on any material amendments made in accordance with clause 8.3.5.	Full compliance	In addition to expected amendments to the Plan, as noted under sub-clause 8.3.5, Hunter Water has reported (Section 7 of 2007 IWRP) on developments since the release of 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 reviewed its demand management activities, reliable yield from supplies and its Drought Management Plan based on the approaches of other Water Authorities both Nationally and internationally (IWRP, 2007; <i>"Why Tillegra Now?"</i> 2007). The major review of the IWRP includes a 50-year planning horizon with specific input from Universities and the Commonwealth Scientific and Research Organisation (CSIRO) regarding Climate Change. The revised Plan will continue to include both supply side and demand side initiatives based on industry best practice.</p> <p>Hunter Water also participates in the annual WSAA benchmarking and sponsorship of the University of Newcastle water related research programs that contribute to application of best practice together with internal programs such as the Indoor/Outdoor Metering Project and the Water Today Project, which provide important community and industry contributions.</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. Hunter Water has made a submission to IPART.
<b>Content and Methodology of the Plan</b>			
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	No requirement	This IWRP was assessed in an earlier audit period. Hunter Water is currently revising the Plan and its review is considering financial, social and environmental costs of all reasonably available options to manage demand and supply of water (as outlined in <i>"Why Tillegra Now?"</i> ).

Clause	Requirement	Compliance	Findings
	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 (a)	The Plan must indicate:  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;	No requirement	Assessed in an earlier audit period.
8.3.10 (b)	The planning assumptions, including drought management assumptions employed;	No requirement	Assessed in an earlier audit period.
8.3.10 (c)	The operational strategy in relation to water resource management; and	No requirement	Assessed in an earlier audit period.
8.3.10 (d)	All other relevant matters employed.	No requirement	Assessed in an earlier audit period.
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	No requirement	Assessed in an earlier audit period.  Note – The reliable yield of Hunter Water's supplies has been reviewed in the 2007 IWRP and takes into account climate change as well as the effect of increased demand imposed by the Central Coast during emergency drought conditions. The systems depletion model includes formulation of conditional supply arrangements present in the agreement with the Central Coast.

Clause	Requirement	Compliance	Findings
	Management Licence.		
8.3.12	<p>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:</p> <p>(d) Total growth in consumption, including specific growth rates across the residential, commercial and industrial sectors;</p> <p>(e) Rates and trends in leakage and real losses, in terms of the components of the Water balance table in the IWA publication;</p> <p>(f) Rates and trends in the demand for Recycled water; and</p> <p>(g) Actual and potential reductions in demand resulting from Hunter Water's initiatives.</p>	No requirement	This requirement was met in the content of the IWRP in March 2003.
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 has been met in the content of the IWRP in March 2003. Note – following the major review of the current Plan, the 2008 IWRP is expected to include more financial details than the summary level information provided in the annual IWRP reports.
<b>Identifying the Options and associated costs</b>			
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 was assessed during the 2002/03 Audit of the IWRP. Note – Multi-Criteria Analysis (MCA) including stakeholder input, via focus groups and/or survey questionnaires, is proposed as part of the major review of the IWRP that is in progress.
8.3.15	<p>In evaluating the options identified under clause 8.3.14 Hunter Water must take all necessary steps to ensure that the Plan;</p> <p>(a) Quantifies the estimated costs of each option identified, which must include the financial (capital and operating), social and environmental costs of each option</p>	No requirement	This requirement has been assessed during the 2002/03 Audit of the IWRP.

Clause	Requirement	Compliance	Findings
	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.	No requirement	This requirement was assessed during the 2002/03 Audit of the IWRP.
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 was assessed during the 2002/03 Audit of the IWRP
<b>Results of the Plan</b>			
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 was assessed during the 2002/03 Audit of the IWRP. Hunter Water has commenced a review of its Integrated Water resources Plan and this will assist IPART in its review.
<b>Annual Reporting on the Plan</b>			
8.3.19	Hunter Water must report its performance against the Plan.	Full compliance	Hunter Water reported its performance against the IWRP in the <i>Integrated Water Resource Plan, Report to IPART</i> , August 2007 as well as in its Annual Report. Hunter Water has a well-defined Regulatory Report Checklist that documents the sequence of events leading up to delivery of the Reports. A Committee of senior management reviews all the Regulatory reports before publication. Six regulatory reports were sent to IPART on 30 August 2007, including the 2007 IWRP.
<b>8.4 - Water Conservation Target</b>			
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	Full compliance	The five-year rolling average for annual residential water consumption for 2006/07 was 206 kL per year per residential property. The accuracy of this figure is approximated from the estimated accuracy of residential meters, which was assessed in 2004 at about $\pm 2.7\%$ . Consequently, the actual figure could be somewhere in the range 200-212 kL

Clause	Requirement	Compliance	Findings
	215 kilolitres ("Water conservation target").		<p>per year per residential property compared to a target of &lt;215 kL per year per residential property achieving full compliance for this condition. It is noted that over 2006/07 water restrictions were not imposed and an even stronger focus on demand management would be expected should restrictions be triggered over a prolonged period of drought.</p> <p>The effect on the target from emergency supply to the Central Coast was assessed as part of sensitivity analysis undertaken as part of the agreement conditions. Although the Central Coast has its own demand management and drought management measures in place, supply from the Hunter occurs only subject to availability of adequate supply and only in emergency drought conditions. Consideration of the Central Coast demand was assessed as being a lumped non-residential supply, which is excluded from the five year rolling average. This assessment is considered appropriate.</p>
8.4.2	Hunter Water must report its compliance with the Water conservation target.	Full compliance	<p>Compliance against the water conservation target of 215 kL was reported in the 2007 IWRP. The general trend for the past six years has been an increase in unit demand from a low figure in 1999/00 of about 196 kL/yr/property to a peak of 209.1 kL/yr/property in 2004/05. Hunter Water believes this trend is due to the growing proportion of homes built post 1987, which have a higher water consumption than houses built before 1987. BASIX and associated water conservation measures are expected to gradually reverse this trend, as has been the case in 2006/07 with a reported value of 206 kL being slightly less than the 208kL reported in 2005/06.</p>
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	<p>Evidence of Hunter Water's continued activities to achieve compliance with the water conservation targets during 2006/07 included: installation of 996 water efficient products in houses and promotion of the REFIT program at the Newcastle Home Show, local shopping centres, Hunter Water's Catchment Day, the sustainable Living Workshops, the Newcastle Show and school and community presentations. A decline in the REFIT installations from 2,513 kits in 2005/06 was due to the introduction of 'free' refit programs provided by other organisations. The REFIT program will nevertheless continue in 2007/08 with an expected 2,500 properties to be retrofitted in partnership with the Department of Housing in 2007/08.</p> <p>Other initiatives detailed in the 2007 IWRP include: 56 rainwater tank rebates; a Community Awareness Campaign – "Save it Together Whatever the Weather"; educational programs, including 45 hard copies and 27 disc Water Kits provided to schools; event sponsorship; Indoor/Outdoor Metering of almost 300 homes; 2055 ML water recycling; galvanized water pipe replacement and 14km of water mains replacement; and repair of 99 system leaks. No pressure management initiatives were undertaken in 2006/07 however, ongoing pressure management planning is progressing</p>

Clause	Requirement	Compliance	Findings
			in 2007/08.  The calculation methods used to estimate water savings from each of these initiatives was reviewed based on supporting information provided by Hunter Water. Although the methods adopted are considered appropriate, given practicable limitations in estimating water savings for such initiatives, it is recommended that estimated savings be reported with expected confidence limits or estimates of error in future IWRP reports.
<b>8.5 - Water Demand &amp; Supply Indicators</b>			
<b>Security of Supply</b>			
8.5.1	Hunter Water may impose Water restrictions only as approved by the Minister.	No requirement	No water restrictions were imposed during the 2006/07 Audit years.
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 2006/07 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 2006/07 Audit year. Note – Hunter Water has reviewed its Drought Management Plan in the 2007 IWRP which includes restrictions at Stage 1 – 60% of supply, Stage 2 – 50%, Stage 3 – 40% and Stage 4 – 30% of supply to bring demand from 225 ML/d to 150 ML/d with Stage 4 restrictions in place.
8.5.4	Hunter Water must report on the quantity of water (in megalitres) supplied from each water storage.	Full compliance	The volumes supplied from each of the four water storages were reported in the 2007 IWRP. Although not an explicit Licence requirement, it is recommended that the accuracy of flow measurement associated with reported values be included in future quantities of water supplied from each source.  In June 2001, a ‘drop test’ was carried out at Tomago to confirm the accuracy of in series flowmeters by checking the drop in actual water level in associated tanks. The accuracy of the individual flow meters was thus established. The SCADA system detects if there is a problem with any flow meter automatically. Only electrical calibration tests, at six monthly intervals, are now undertaken to identify if there are any problems with the meters.

Clause	Requirement	Compliance	Findings
			The previous “drop test” indicated a bias towards under-reporting at lower flows (57ML/d) at the Grahamstown clear water tank outlet flow meter. However, the average flow rate is around 90ML/d. Hence, the effect of this bias would be relatively small and Full compliance has been awarded.
<b>Losses from the Water System</b>			
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 reported against the required components in the 2007 IWRP and in the <i>Environmental and ESD Indicators Report</i> which is available on Hunter Water's website. Reported volumes are based on meter readings. Meter volumes are adjusted for reading phase shift/cycle times. Property type is used for filtering.
8.5.6	<p>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.</p> <p><i>[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.]</i></p>	Full compliance	<p>The differences are reported in Sections 3 and 5 of the 2007 IWRP. Where the difference suggested increasing trends in water consumption or in water losses, Hunter Water described the actions it has implemented to try to reduce water consumption or losses in the specific area.</p> <p>In April 2007, Hunter Water joined the <i>TogetherTODAY</i> program aimed at improving water and energy efficiency in the Hunter through an industry partnership process. <i>TogetherTODAY</i> effectively replaces the Cleaner Production Program of 2005/06. Two water saving programs were launched in July 2007. Progress and details will be provided in future IWRP reports.</p>
<b>Recycled Water</b>			
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> <p>(a) for industrial or commercial use;  (b) for direct use in irrigation; or  (c) for uses, other than those described in (a) or (b).</p>	Full compliance	<p>The quantities of recycled water in each category were reported in the 2007 IWRP report, with industrial reuse at 1,393 ML, direct use in agriculture at 426 ML, tree plantations at 38 ML, process water at Waste Water Treatment Plants at 180 ML, Recycled Water Enterprises at 91 ML and indirect use in agriculture at 1,450 ML, comprising 4,060 ML total reuse and 2,055 ML potable substitution. The total volume of recycled water in 2006/07 was similar to 2005/06 despite lower agricultural reuse (due to high rainfall in September 2006 and June 2007), being offset by higher industrial reuse Eraring Power Station and the Edgeworth coal washery.</p> <p>The annual amount of directly reused recycled water expressed as a percent of dry</p>

Clause	Requirement	Compliance	Findings
			<p>weather flow entering Hunter Water's wastewater treatment plants was 5.3%. While this is less than the 13% target indicated in Hunter Water's Environment Management Plan (EMP), it is noted that the 13% target is an internally set target and not a Licence requirement.</p> <p>Hunter Water undertook a Recycled Water Study commencing in April 2006. Stage 1 of that Study identified potential recycling opportunities, including a short-list of potential projects that are being developed in Stage 2. The 2007 IWRP lists several recycled water projects that Hunter Water is currently pursuing based on the findings of the Recycled Water Study.</p> <p>The volumes of recycled water utilised are subject to fluctuations in economic and industrial conditions beyond Hunter Water's control. Provision of some form of indicators of reuse rather than fixed targets and/or targets to increase recycling within Hunter Water's sewage treatment plants, as recommended in the 2006 Issues Paper Review of the Operating Licence is supported. Other initiatives should be based on more detailed analysis of potential savings from tangible projects as identified in the Stage 2 Recycled Water Report (in preparation).</p>
<b>Demand Management</b>			
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> <p>(a) Consumption by persons in Residential Properties;  (b) Industrial and commercial uses (excluding use by a Large Customer); and  (c) Consumption by Large Customers.</p>	Full compliance	The quantities were reported in the 2007 IWRP report to IPART.
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> <p>(a) growth in the Customer base;  (b) climatic impact;  (c) the nature or extent of consumption of Recycled</p>	Full compliance	<p>Comparison of the quantity of water supplied for each class of consumer was reported in Section 2.2 of the 2007 IWRP Report and is summarised below.</p> <p>Actual residential consumption in 2006/07 was about 10% higher than the 2003 IWRP forecast due to drier climatic conditions and a greater number of new domestic connections than previously forecast. The actual residential consumption was slightly lower than last years forecast due to mild climate conditions and regular rainfall during summer months. Revised forecasts include increased population projections, the introduction of BASIX (decreased future growth demands) and other demand management initiatives such as the REFIT program, which is expected to include 2,500</p>

Clause	Requirement	Compliance	Findings
	water; or (d) demand management initiatives.		<p>Housing Department properties in 2007/08.</p> <p>While there has been a drop off in the number of REFIT kits installed by Hunter Water over 2005/06 and 2006/07 due to private sector competitors offering alternate kits at “no cost” and/or lower prices, it is suggested that where practicable, details of kits installed by other providers be reported. While this is not a Licence requirement and is subject to practical considerations, it would add further weight to Hunter Water’s understanding of the effectiveness of demand management programs.</p> <p>The non-domestic consumption has increased significantly since 2005 mainly due to increasing bulk supply to the Central Coast (2.2 GL pa in 2005/06 and 3.6 GL pa in 2006/07). The capacity of the Central Coast transfer pipeline will increase to 35 ML/d (equating to a maximum of 12.8 GL pa) in 2008, although supply will be subject to emergency drought conditions only. Excluding the large water users, non-domestic consumption has remained relatively constant since 1989. Revised forecasts for non-domestic demand take into account the planned Kooragang/Mayfield recycled water scheme expected to reduce potable water consumption by 3GL pa by 2011.</p> <p>The total recycled water, as a percent of dry weather flow entering wastewater treatment plants (including indirect agricultural use), was 8.3%. While this is less than the target indicated in Hunter Water’s EMP, it is noted that the 13% target is an internally set target and not a Licence requirement and was set somewhat arbitrarily by Hunter Water. It is recommended that a future target for recycled water be based on more detailed analysis of potential savings and tangible projects being considered in the 2008 major review of the IWRP. This information can then be used to inform the setting of an appropriate potable water substitution target for Hunter Water.</p>

#### 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	The 2007 IWRP Report summarises Hunter Water’s performance in the areas specified under clause 8.5.1 to 8.5.9; namely security of supply, water losses, recycled water and demand management achieving full compliance for this condition.
8.6.2	Hunter Water must also publicly display the report provided under clause 8.6.1 on its website on the	Full compliance	The August 2007 IWRP Report was forwarded to IPART on 30 August 2007 and is available for download from its website (confirmed 4 September 2007) achieving full

Clause	Requirement	Compliance	Findings
	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.		compliance for this condition.
<b>Ministerial Requirement 2005/06</b>			
	<p>Following the findings and recommendations of the 2005/06 Operational Audit, the Minister made the following Requirement of Hunter Water:</p> <ul style="list-style-type: none"> <li>Development of a summary table for water saving initiatives. For 2006/07 this was to identify expenditure and savings achieved for the year and key reasons for performance.</li> </ul>	Full compliance	The 2007 IWRP Report includes a summary table for water-saving initiatives. The table summarises identifiable costs incurred during 2006/07 relating to the water-saving initiatives outlined in the IWRP and where possible water savings during the same period have been estimated.

## **8.5 Discussion**

### **8.5.1 Integrated Water Resources Plan (IWRP)**

The IWRP is well defined and in the process of being updated to consider issues such as climate change and drought security, supply augmentation options, opportunities for further recycling and demand management. The ongoing focus on both supply side and demand side initiatives to secure the future of water supply for the Hunter Region is encouraging following the announcement of the new Tillegra Dam project.

### **8.5.2 Water Conservation Target**

Hunter Water continues to achieve an annual residential consumption below the target of 215 kL/yr/residential property. The effect on the water conservation target of emergency supply to the Central Coast was assessed as part of the sensitivity analysis as part of the supply agreement. Supply from the Hunter Water to the Central Coast occurs only subject to availability of adequate supply. Consideration of the Central Coast demand as a lumped non-residential supply, excluded from the domestic water conservation target calculations, is considered appropriate given the terms of the supply agreement.

### **8.5.3 Water Demand and Supply Indicators**

Hunter Water provided information on the relevant indicators of water demand and supply indicators in its 2007 IWRP. Performance was generally good.

Previous audit concerns regarding uptake of recycled water by industry and translating water audits of industry into actual water savings have been addressed through a detailed Recycled Water Study. This Study, undertaken by Hunter Water, has identified tangible projects to form part of the 2008 IWRP major review. It is recommended that a future target for recycled water be set based on more detailed analysis of potential savings and tangible projects being considered in the 2008 IWRP review. This information can then be used to inform the setting of an appropriate potable water substitution target for Hunter Water.

It is recommended that HWC also report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future IWRP reports.

### **8.5.4 REFIT Kit Program**

The drop off in the number of REFIT kits installed by Hunter Water over 2005/06 and 2006/07 is understood to be due to private sector competitors offering alternate kits at 'no cost' and/or lower prices. While Hunter Water will continue the REFIT program with 2,500 Department of Housing properties targeted for retrofit in 2007/08, it is recommended that where practicable, details of kits installed by other providers be reported.

### 8.5.5 Water Demand and Losses from the Water Supply System

Table 8.2 shows the water demand and associated losses.

The Water Services Association of Australia (WSAA) benchmarking guidelines are used to calculate water losses.

Real water loss from Hunter Water's water supply system for 2006/07 was estimated at 7,193 ML/annum, which is 9.6% of total water supplied.

Various indices can be used to assess the losses. There was an unusually large drop in all water loss indices from 2004/05 to 2005/06 compared to previous years. Hunter Water believes this reduction was the combined effect of the water loss prevention activities and, although there has been a slight increase in 2006/07, Real Losses are still less than previous years excluding 2005/06.

**Table 8-2 Water Demand and Water Losses from Water Supply System**

	Annual Water Consumption (ML/annum unless indicated otherwise)					
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Total Water Demand	73,566	77,627	72,882	71,616	72,800	74,800
Authorised Consumption	62,014	66,407	62,844	61,308	64,452	65,500
Water Losses (non Revenue)	11,552	11,220	10,038	10,308	8,376	9,200
Apparent Losses <sup>1</sup>	3,806	3,301	1,862	1,842	1,954	1,976
Real Losses <sup>1</sup>	8,466	7,919	8,174	8,466	6,422	7,193
Real Losses/Connection/Day (litres)	155	106	113	110	87	85
Real Losses/Connection/Average Metre of Pressure (litres)	2.30	2.11	2.03	1.99	1.57	1.53
Real Losses (as a % of Water Supplied)	11.5%	10.2%	11.2%	11.84%	8.8%	9.6%
Real Losses per km of pipe	2.03	1.79	1.84	1.86	1.51	1.53
Infrastructure Leakage Indices	2.3	2.0	1.7	1.7	1.3	1.3

(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)

### **8.5.6 Water Conservation and Recycling Activity During 2006/07**

#### **► Leak Detection & Active Leakage Control**

No funds were spent on pressure management initiatives in 2006/07. A strategy study is being undertaken, however, to develop an automated pressure reduction tool for the Maitland/North Rothbury zone. This too is expected to be developed by 2007/08 and will provide an opportunity to apply this technology to other parts of Hunter Water's system.

Following concerns in previous audits of an implied accuracy in the indicated water savings from replacement of galvanized iron pipes and priority water mains, it is recommended that Hunter Water report on the expected accuracy of its methods to estimate water savings from its various water saving initiatives in future IWRP reports.

#### **► *TogetherTODAY* and Water Audits of Businesses**

With the cessation of the Cleaner Production Project in 2006, it is recommended that water audits of businesses continue through the *TogetherTODAY* program to find and implement water saving initiatives in non-domestic customers, including leak reduction, process improvement, demand management and recycled water use.

#### **► Indoor/Outdoor Residential Metering Program**

One important gap in demand management is an accurate understanding of where water is used in residential properties and the link between property characteristics (for example, garden size, soil type, number of occupants) and the split of water uses. In 2006/07, Hunter Water installed the majority of new water meters at the 300 participant homes with the remaining meters to be installed by September 2007.

Preliminary annual results of the first 30 homes installed in 2005 are reported in the 2007 IWRP, indicating that summer residential demand is typically more than 50% of winter demand. While this is reported to be a result mainly of reduced outdoor water use, indoor water use also fell in winter. The outdoor water use represented 25% of the overall annual consumption, which is in line with historical demand forecasts.

The Indoor/Outdoor program will run for 13 months and is expected to substantially improve the understanding of residential water consumption and the effective targeting of demand management activities.

#### **► Recycled Water**

During 2006, Hunter Water completed a review of recycling opportunities and found that the maximum practicable recycling limit for non-potable reuse (mainly by Industry) is about 16% of average dry weather flows arriving at the Wastewater Treatment Plants. To date the amount reused is about 5.3%. The second stage of the Recycled Water Study is developing the scope of a number of short-listed recycled water projects. It is recommended that Hunter Water set a target for recycled water based on detailed analysis and tangible projects identified in the Stage 2 Recycled Water Report (in preparation).

## 8.6 Discussion of Ministerial Requirement for 2005/06

*Ministerial Requirement 2005/06:* ‘Hunter Water should “develop a summary table for water saving initiatives. For 2006/07, this table should identify expenditure and savings achieved for the year and key reasons for performance. For later years, the table should identify annual budget, actual expenditure, the increase to targeted water savings increase, actual savings achieved for the year and key reasons for performance. I request that Hunter Water publish the table on its website”.

The 2007 IWRP Report includes a summary table for water-saving initiatives. The table summarises identifiable costs incurred during 2006/07 relating to the water-saving initiatives outlined in the IWRP and where possible water savings during the same period have been estimated. The IWRP report is published on Hunter Water’s website.

## 8.7 Overview of Compliance

Specific factors noted, albeit not affecting compliance are:

- ▶ Hunter Water achieved 8.3% reuse in 2006/07 against an internally set target of 13%;
- ▶ Significant drop-off in uptake of REFIT kits and a lack of reporting on uptake of kits installed by other organisations;
- ▶ Lack of reported accuracy and/or confidence limits of the estimate of water savings from various initiatives including water service pipes/mains replacement and leakage repairs;
- ▶ A need to progress the Recycled Water Study findings, Industry Water Audits and *TogetherTODAY* initiatives into actual water savings; and
- ▶ Lack of progress in developing another pressure reduction zone.

## 8.8 Factors Affecting Compliance

Hunter Water has delivered all documents required in its Licence for Water Supply and Demand. The “*Why Tillegra Now?*” paper suggests ongoing focus on both supply side and demand side initiatives to secure the future of water supply for the Hunter Region. This is particularly encouraging following the announcement of the new Tillegra Dam project that will significantly augment the supply side.

The expected accuracy and/or confidence limits of estimated water savings from various initiatives is not stated in the IWRP, however, potentially implying greater accuracy than that which is practicable.

Progress on achieving water savings in some key areas also has been delayed by cessation of the Cleaner Production Project where follow up on potential savings from industry water audits are yet to produce any water savings.

It is expected that a recycled water target will be developed from the Recycled Water Study findings based on more detailed analysis of potential savings from tangible projects and that this information can be used to inform the setting of an appropriate potable water substitution target following the major review of the IWRP in 2008.

Overall, however, Hunter Water has established many excellent and ongoing water supply and demand activities, including its leak detection/reduction program, its Indoor/Outdoor Metering Project, its Pressure

Management Project, its review of water recycling opportunities and the REFIT kit. The success of many programs will depend on community and industry stakeholder support, hence the *TogetherTODAY* program and ongoing community awareness and education is strongly encouraged. These initiatives will be particularly important in the public consultation component of developing the new IWRP.

## **8.9 Recommendations**

### **8.9.1 Key Recommendations**

It is recommended that Hunter Water:

- R 8.1            Set the target for recycled water based on a more detailed analysis of potential savings and tangible projects; the information can then inform the setting of an appropriate potable substitution target.
- R 8.2            Report on the expected accuracy of its method to estimate water savings from its various water saving initiatives in future IWRP reports.

### **8.9.2 Secondary Recommendations**

It is recommended that Hunter Water:

- R 8.3            Report on details and water conservation achievements of kits installed by other providers wherever practicable to do so.

## 9. Environment – Indicators and Plans

### 9.1 Summary of Findings

#### ► The Environmental Management Plan

Compliance with the majority of clauses with respect to the '*development*' of an Environmental Management Plan (EMP) was achieved in the 2002/03 audit period and in the 2004 – 2007 Strategic Business Plan. Thus '**No requirement**' was recorded for performance against the majority of clauses. Consequently, performance related primarily to monitoring activities over 2006/07, for which **Full compliance** was assessed.

Hunter Water has made no material or other amendments to the EMP during the current reporting period.

The current EMP is available on the Hunter Water website as well as in public libraries within the service area. In addition, customers may obtain a hard copy of the EMP directly from Hunter Water's customer service centres.

#### ► Environmental and ESD Indicators

Similarly, compliance with the requirements of the majority of clauses relating to environmental and ESD indicators was achieved in the 2002/03 audit period and there was '**No requirement**' within the current audit period.

Hunter Water has achieved **Full compliance** against clauses that relate to monitoring, compiling data and reporting performance against the environmental and ESD indicators for 2006/07.

#### ► Energy Management

Hunter Water has achieved **Full compliance** against clauses that relate to energy management.

The auditor notes that Hunter Water has exceeded its requirement to develop Energy Savings Action Plans and has instigated a range of energy savings initiatives.

## 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 participation in the Energy Smart Business Program.

Clause 11.2.1(d) requires IPART, or the auditor, to investigate and report on Hunter Water's *'performance'* under Part 9 of the Operating Licence. For consistency, in definition and presentation of audit findings, the *'compliance'* ratings (as opposed to a separate *'performance'* rating) has been retained. This clause does not set requirements for Hunter Water but for IPART and/or the auditor.

### 9.3 Details of Performance

**Table 9-1 Licence Part 9 - Environment – Indicators and Plans**

Clause	Requirement	Compliance	Findings
<b>9.1</b>	<b>Environmental Management Plan</b>		
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	Compliance was achieved in the 2002/03 audit period, with preparation of the 2002-2007 five-year Environmental Management Plan.  Hunter Water also provided evidence that it had commenced preparation of the 2008-2013 five-year Environmental Management Plan.
9.1.2	Hunter Water must engage in Public consultation in developing an Environmental Management Plan.	No requirement	Compliance was achieved in the 2002/2003 audit period.
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.	No requirement	a) Compliance was achieved in the 2002/03 audit period.  b) Compliance was achieved in the 2002/03 audit period.  c) Compliance was achieved in the 2004-2007 Strategic Business Plan.  Hunter Water also provided evidence that it had commenced preparation of the updated Environmental Management Plan and Strategic Business 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.	No requirement	Compliance was achieved in the 2002/03 audit period with the Minister's approval of targets and timeframes.

Clause	Requirement	Compliance	Findings
9.1.5	Any material amendments may only be made to the Environmental Management Plan following Public consultation.	Full compliance	No amendments have been made to the Plan over the audit year.
9.1.6	Hunter Water must report on any material amendments made in accordance with 9.1.5.	Full compliance	No amendments have been made to the Plan over the audit year.
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 Environmental Management Plan is available on the Hunter Water website and is available by request at its Customer centres.</p> <p>The Environmental Management Plan is also available at local libraries.</p>
<b>9.2</b>	<b>Environmental and ESD Indicators</b>		
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 on indicators including:</p> <ul style="list-style-type: none"> <li>▶ Water quality;</li> <li>▶ Wastewater quality;</li> <li>▶ Beach water quality (Beachwatch);</li> <li>▶ Biosolids and effluent reuse;</li> <li>▶ Waste and recycling (WRAPP);</li> <li>▶ Energy usage (Government Energy Management Plan);</li> <li>▶ Water Services Association of Australia standards;</li> <li>▶ Billing and metering;</li> <li>▶ Customer complaints; and</li> <li>▶ Population, customers and costs.</li> </ul>

Clause	Requirement	Compliance	Findings
			In 2007, the protocol for reporting on System Performance Indicators was expanded to include all Operating Licence indicators, including environmental and ESD.
9.2.2	Hunter Water must develop a draft list of environmental and ESD indicators within 3 months of the Commencement date.	No requirement	Compliance was achieved in the 2002/03 audit period.
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 was achieved in the 2002/03 audit period.
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 was achieved in the 2002/03 audit period.
9.2.5	The draft list of environmental and ESD indicators developed by Hunter Water must undergo Public consultation.	No requirement	Compliance was achieved in the 2002/03 audit period.
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 was achieved in the 2002/03 audit period.
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.	No requirement	Compliance was achieved in the 2002/03 audit period.
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	<p>Hunter Water has reported its performance against its environmental and ESD indicators for 2006/07 within the 2006/07 Environment and ESD Indicators Report. This report meets the requirements of the Operating Licence.</p> <p>Trends are illustrated graphically for quantitative data and are discussed for qualitative data.</p>

Clause	Requirement	Compliance	Findings
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	Hunter Water's Operating Licence expired on 30 June 2007 and a new licence has been issued. Environmental and ESD indicators were included as part of the IPART review.
<b>9.3</b>	<b>Energy Management</b>		
9.3.1	During this Licence, Hunter Water must participate in the Energy Smart Business Program, or similar program administered by SEDA.	Full compliance	<p>SEDA no longer exists. Energy Savings Action Plans are now administered through the NSW Department of Water and Energy (DWE).</p> <p>Hunter Water has developed Energy Savings Action Plans for its ten largest energy uses, including pumping from the Tomago Sand Beds.</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.	Full compliance	<p>Refer to comments provided against Clause 9.3.1.</p> <p>The 2006/2007 Environmental and ESD Indicator Report has been issued and will be available on Hunter Water's website during October 2007. Energy Management is a component of that report.</p> <p>Reporting of the outcomes of the Energy Savings Action Plan will be undertaken through the Government Energy Management Plan (GEMP) process.</p>

## **9.4 Discussion**

### **9.4.1 Environmental Management Plan**

Hunter Water has previously achieved full compliance with respect to the development of an Environmental Management Plan. Compliance with these requirements (Clauses 9.1.1, 9.1.2, 9.1.3a and 9.1.3b) was achieved in the 2002/03-audit period and there are no additional requirements within the current audit period. Compliance with Clause 9.1.3c was achieved in the 2004 – 2007 Strategic Business Plan and there are no additional requirements within the current audit period.

Hunter Water is currently in the process of developing the EMP for the period 2008 to 2013. The draft has been on public exhibition and is being finalised with a view to release in February 2008.

### **9.4.2 Environmental and ESD Indicators**

Full compliance was assessed against clause 9.2.1 and 9.2.8 that relate to monitoring, compiling data and reporting performance against the environmental and ESD indicators. Hunter Water compiles a range of information for water and wastewater, effluent reuse, waste management, energy usage and financial and customer information, and reported the outcomes in an annual Environmental and ESD Indicators Report.

In 2007, the Report provided trends over the last four to five years, depending on availability of data. Qualitative data is discussed so that trends for non-measurable outcomes can be considered. The protocol for reporting on System Performance Indicators in 2007 was expanded to include all Operating Licence indicators, including environmental and ESD.

Clause 9.2.9 requires environmental and ESD indicators to be reviewed as part of the Licence review. Hunter Water's Operating Licence expired on 30 June 2007 and a new licence has been issued. Environmental and ESD indicators were included as part of the IPART review.

### **9.4.3 Energy Management**

Hunter Water has achieved full compliance against Clause 9.3.1 and 9.3.2 that relate to energy management.

Hunter Water has developed Energy Savings Action Plans for its ten largest buying points. This is in excess of DWE requirements, which prescribe an audit of the single largest buying point.

Energy Management is a component of the 2006/2007 Environmental and ESD Indicator Report, which has been issued and will be available on Hunter Water's website during October 2007. In addition, reporting of the outcomes of the Energy Savings Action Plans will be undertaken through the Government Energy Management Plan (GEMP) process.

Hunter Water has undertaken a number of initiatives in its Energy Savings Action Plans, including:

- ▶ Recognition of a lack of knowledge of energy use within its facilities has led to the installation of sub-metering;

- ▶ All treatment plants are operated under contract to Hunter Water Australia Pty Ltd. Hunter Water has included incentives within its operating contracts to encourage more energy efficient operations;
- ▶ Hunter Water has commenced installation of more energy efficient motors within its pump stations. Pumping is the major energy use within Hunter Water's operations;
- ▶ Hunter Water has commenced installation of a mini-hydroelectric generator utilising spare head in its Wyong water supply system. This feeds directly into the NSW power supply grid;
- ▶ Hunter Water has undertaken power factor corrections at eight sites; and
- ▶ Aeration ponds are to be fitted with more stable control systems.

## **9.5 Factors Affecting Compliance**

No extraordinary 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**

Nil.

## 10. Catchment Management

### 10.1 Summary of Findings

Hunter Water has achieved **High compliance** for activities under Part 10 of the Operating Licence relating to Catchment Management.

#### ► Catchment Report

The Catchment Report 2006/07 provides information on the comprehensive catchment management activities undertaken by Hunter Water and as required (under Clause 10.1.1) and including:

- Bulk water quality;
- Activities undertaken in accordance with Hunter Water (Special Areas) Regulation, 2003, the Williams River Catchment Regional Environmental Plan, the Williams River Regional Planning Strategy (1997) and the Seaham Weir Operations Plan;
- Performance against its Water Management Licence; the condition of its dams, ponds and detention basins under the Dam Safety Act 1978;
- Additional water or land management activities undertaken within the catchment; and
- Five-year trends observed in the Williams River against specified water quality parameters and other routinely tested water quality parameters.

Importantly, the combined effectiveness of these activities is reflected in continued good water quality. However, a number of opportunities for improvement have been identified. Firstly, to enhance the format of the Catchment Report, so that achievement and outcomes delivered during the Operational year are clearly enunciated. Secondly, the ability to set and monitor catchment health targets more directly linked to the broader environmental indicators program. Thirdly, the report contained a number of data errors relating to the Williams River flow and Balickera pumping rates which are now being corrected and the 2007 Catchment Report will be reissued.

#### ► Public Display of the Catchment Report

The Catchment Report is available on the Hunter Water website. In addition, customers may obtain a hard copy of the Report directly from Hunter Water's customer service centres.

### 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 Sub-clause sets out the requirements for a Catchment Report and reporting; and

- **Clause 10.1.2 – Public Display of the Catchment Report:** This Sub-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 investigate and report on Hunter Water's compliance 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 11.2.1(f) of the Operating Licence.

Clause 10.1 of the Operating Licence requires Hunter Water to prepare a report known as the *'Catchment Report'*.

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 the following:

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 coordinated and consistent 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.
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 website for people to be able to download, free of charge. Hunter Water must also make the report available at its premises to be read or taken away, free of charge.

## 10.3 Details of Compliance

**Table 10-1 Licence Part 10 Catchment Management**

Clause	Requirement	Compliance	Findings
<b>10.1</b>	<b>Catchment Report</b>		
10.1.1	<p>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:</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> <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;</p> <p>(c) details of Hunter Water's performance against the Water Management Licence and the Dam Safety Act 1978;</p> <p>(d) other catchment, Landcare or other supporting activities conducted by or on behalf of Hunter Water; and</p> <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>Moderate compliance</p> <p>Full compliance</p> <p>Moderate compliance</p> <p>Full compliance</p> <p>Moderate compliance</p> <p>Full compliance</p>	<p>The <i>2006/2007 Catchment Report</i> was published in August 2007 and was submitted to Hunter Water's "Open" Board of Directors at their meeting of 30 August 2007. Minutes of the meeting acknowledged receipt of the Report. The Report is also available on Hunter Water's website. Detailed reports and minutes, media releases, water quality data, and technical sheets clearly demonstrated Hunter Water's extensive catchment management activities. Examples of these activities were made available.</p> <p>The <i>2006/2007 Catchment Report</i> covered the following:</p> <p>a) Monitoring results and trend lines for all of the nominated bulk water monitoring parameters specified in Schedule 3 of the Operating Licence, including pesticides, chemical contaminants and radiological activity.</p> <p>b) Hunter Water has reported on all activities conducted under the planning instruments listed in the Operating Licence in the 2006/2007 Catchment Report, including the following:</p> <ul style="list-style-type: none"> <li>▶ A change in its regulator responsibilities from the previous Department of Natural Resources (DNR) to the new Department of Water and Energy (DWE), for access licencing functions and other catchment management functions to the new Department of Environment and Climate Change (DECC).</li> <li>▶ Regular inspections and maintenance of the existing Seaham Weir fishway and farm floodgates along the weir pool, now, in accordance with the Water Management Licence Seaham Weir Operating Plan, erection of signage on the floodgate structures to assist with identification; the removal of woody regrowth along the Seaham Weir rock embankment; and new security gates at the entrance to the rock wall.</li> </ul>

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- (iii) faecal coliforms;
  - (iv) chlorophyll-a;
  - (v) turbidity; and
  - (vi) other parameters as routinely tested and measured by Hunter Water.

*Note (1):* Much of the wording reporting performance in the 2007 Catchment Report, (for example regrading the erection of signage), is the same as in the earlier 2006 Catchment Report and was queried with HWC. The Corporation advised that despite the 2007 Report indicating so, it had not installed further entry sign on the Seaham Weir gate over the year but did so in the previous year. It also indicated that a number of the programs were ongoing. Recommendations to improve reporting of activities in each year and against longer-term objectives have been made.

- ▶ Studies and trials under the *Williams River Catchment Regional Environmental Plan and Regional Planning Strategy* resulted in NSW Fisheries advising Hunter Water that there was no requirement to provide fish passage between the Williams River and Hunter Water's off-river storage at Grahamstown. NSW Fisheries recommended that a pump flush procedure be carried out after each pumping event to release any eels that had been trapped in the pump station pipe work. This procedure is now adopted as a standard operating procedure and is an ongoing practice.

*Note:* The same wording was reported in 2006 and 2007, and the above *Note 1* applies.

- ▶ Hunter Water has provided comments to relevant authorities in relation to Development Applications for proposals within the areas prescribed in the Hunter Water Special Areas Regulation. During 2005/2006 Hunter Water provided comment on development, subdivision and re-zoning applications, including:
  - ▶ DA for racing circuit and drag strip at 49 & 53 Pacific Highway and no. 105 Italia Road, Balickera.

*Note:* The same wording was reported in 2006 and 2007, and the above *Note 1* applies.

- ▶ Proposed Asphalt Plant at Tomago;
- ▶ Proposed RAAF plane rinsing facility at Salt Ash; and
- ▶ Sand extraction activities at Tanilba and Salt Ash.

- ▶ Hunter Water also provided comment on landuse strategy proposals including:
    - ▶ Port Stephens Settlement Strategy; and
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- 
- RAAF Base/Newcastle Airport Williamtown and Environs Land Use Strategy.

Note: The same wording was reported in 2006 and 2007, and the above *Note 1* applies.

- c) The 2006/2007 Catchment Report contains sections reporting on Hunter Water's performance against its Water Management Licence and the Dam Safety Act 1975, including, for example, the following:

- Dissolved Oxygen levels in Chichester Storages to fall below a minimum of 80%; and
- Malfunction of the Seaham Weir casing the weir poll to fall below the minimum level of 0.42mAHD.

Statutory five-yearly surveillance reports on all of Hunter Water's dam structures, being Chichester Dam, Grahamstown Dam and Winding Creek Detention Basin, were submitted to the Dam Safety Committee earlier, namely during 2003. Thus, no major activity was required over the year.

- d) The 2006/07 Catchment Report includes sections on Hunter Water's involvement with catchment, Landcare and other supporting activities in 2006/2007, such as:

- Support for the Lake Macquarie Landcare Inc.; and
- Support for Morriset and Districts Landcare.

- e) e)The 2005/2006 Catchment Report includes five-year water quality trends for the required water quality parameters and for twelve additional parameters. Data is displayed graphically showing trend lines.

Note: The above *Note 1* applies.

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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	The Catchment Report is available on the Hunter Water website and is available by request at its Customer centres.
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## 10.4 Discussion

Hunter Water must report its performance against its catchment management activities, in a report to be known as the *Catchment Report*. A review of the 2006/07 *Catchment Report*, compared to the 2005/06 and in some cases reference to the 2004/05 report, shows a consistency of format and, in numerous examples, wording. To assist readers in gaining an appreciation of HWC achievement in catchment management, from year to year, it is recommended that the annual achievements and actions be highlighted, or summarised, within the relevant sections.

In regard to Hunters Water's activities under the Williams River Catchment Regional Environmental Plan the auditor sought clarification of the reported water transfers, from the River to Grahamstown Dam. In response Hunter Water advised it had identified some errors in the Report, namely relating to the use of unverified data sources (for which a 3 to 6 month delay was involved in receipt from DWE), and incorrect SCADA data. It is recommended that Hunter Water discuss with DWE the provision of more timely provision of data from the Hunter Integrated Telemetry System and review the data verification of its own SCADA system.

As outlined in Table 10.1, some wording reporting catchment management activities and performance in the 2007 Catchment Report was the same as in the earlier 2006 Catchment Report and was queried with HWC. The Corporation advised that a number of the programs were ongoing and the activities related to previous years. A recommendation to improve the clarity of reporting of activities in each year and against longer-term objectives has been included.

In reviewing the Catchment report, a further opportunity for improvement relates to a clearer expression of its Catchment activities framework. Pleasingly, the overall outcome of Hunter Water's Catchment program is reflected in continuing, and in some case improving (five and twenty year), water quality trend data. However, it is open to Hunter Water to set and then monitor catchment performance targets across area (such as biodiversity, extent and trends in aquatic weeds, adoption of its Best Management Practices, etc) so that it has intermediate and short-term targets. In turn, these targets can guide catchment program objectives, budgeting, expenditure and performance reporting. Equally these catchments performance targets could be more directly aligned to its Environmental Indicator reporting program.

It is noted that these opportunities have been reflected in the new Operating Licence, commenced in July 2007, and has required a more strategic focus in planning, implementing and reporting on Hunter Water's catchment management activities.

## 10.5 Factors Affecting Compliance

The April and June 2007 floods had a significant impact on the Hunter River, yet only minor reference is made to the flood in the 2006/07 Catchment Plan. Upon querying this observation Hunter Water advised that the Hunter River is not one of its water sources and not relevant to the Catchments Management Plan. Further, the only flooding impact in the Hunter River, in term of catchment activities, was the extended time taken for the Williams River to return to normal flow levels.

## **10.6 Recommendations**

It is recommended that Hunter Water:

- R 10.1 Highlight, or summarise, its achievement in catchment management in the nominated year, as compared to cumulative actions, within the relevant sections of its Annual Catchment report to assist the readers.
- R10.2 Develop a catchment management framework of objectives, budgets, targets and performance reporting to guide its activities, and to the extent possible coordinate this with its Environmental Indicator report requirements.
- R 10.3 Establish with DWE arrangements for the more timely provision of data from the Hunter Integrated Telemetry System and review its own the data verification systems of its remote telemetry (SCADA) data system.

### **10.6.1 Secondary Recommendations**

Nil.

# 11. Complaint and Dispute Handling

## 11.1 Summary of Findings

### ► Effectiveness of Complaints and Dispute Handling Procedures

Hunter Water operates an effective complaints handling process and has achieved **High compliance** with this part of the Licence. Its systems are designed to comply with the Customer Contract Australian Standard, and to measure, monitor 'effectiveness' and regularly report to senior management and its customers on performance.

An independent survey during 2007 determined that the overall level of customer satisfaction was reduced (from 77% in 2005 to 75% in 2006/07) compared to 80% required by the Key Performance Indicator targets.

The introduction of a new billing system (Customer Information System, CIS) contributed to higher complaint levels and saw a first half year decline in a number of performance parameters, such as higher rates of abandoned calls and longer times to answer calls.

Overall, the total number of complaints fell by some 9%, and good improvements in a number of areas (for example, reduced operational complaints) were masked by a higher number of complaints following the introduction of a new Billing system.

### ► Complaints to Other Bodies

Hunter Water advised that there have been no complaints to a Court or Tribunal during this audit period.

## 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 as outlined below.

- **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 the 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.

Clause 11.2.1(j) requires IPART, or the auditor, to report on the 'effectiveness' of Hunter Water's internal complaints handling processes under Clause 12.1 and external dispute resolution scheme under Clause 12.2. Clause 11.2.1 (k) requires IPART or the auditor to report on 'Complaints made' against Hunter

Water to a Court or Tribunal under Clause 12.3. Although for consistency, in definition and presentation of audit findings, the '*compliance*' ratings (as opposed to a separate '*effectiveness*' or '*complaints made*' rating) has been retained. This Clause does not set requirements for Hunter Water or IPART and/or the Auditor.

This section of the report presents the auditors findings in relation to Clause 11.2.1(j) and Clause 11.2.1(k).

## **11.4 Discussion**

### **11.4.1 Complaints Handling Procedures**

Hunter Water uses two systems to log customer contacts. All service calls relating to water, sewerage and drainage systems are reported on the Assets and Operations Maintenance System (AOMS) and all other complaints are reported on the Complaints Management System (CMS). Over the year, it also introduced a new Customer Information System, which is further discussed in the following section.

The Hunter Water Customer Service Centre handles approximately 10,000 contacts per month. New staff members to the Call Centre are provided with on-the-job training related to operation of the automated systems, use of the telephone system and handling of basic calls. This is undertaken in a coaching environment and new staff members are monitored in the initial stages. The call centre also operates within a common area where support is readily available from supervisors, if required, and regular team meetings are also used to discuss up-coming issues, trends and performance.

Complaints received by the Call Centre are logged into an on-line Complaints Management System designed specifically to meet the requirements of the Customer Contract. Matters that cannot be resolved by the call centre are referred to a Case Investigation Team.

Consistency in meeting the requirements of the Customer Contract is facilitated by the automation of the Customer Management System and Billing System. Centralising all complaints to a small group also facilitates consistency in the manner in which the complaints are managed and handled.

Hunter Water monitors and reports the effectiveness of the internal complaints handling process using a number of tools:

- ▶ weekly monitoring of data from the Complaints Information System to identify trends, systemic issues and response times;
- ▶ fortnightly surveys are undertaken of customers who contact the Call Centre; and
- ▶ biennial perception surveys are undertaken by an external body.

(Note: During the audit period, the findings of the biennial perception survey were reported in September 2007, as discussed in Table 11.1).

Performance of the systems and procedures is reported to the General Manager on a monthly basis. Complaints statistics are also presented to the Consultative Forum, quarterly.

## **11.5 Factors Affecting Compliance**

A key feature of complaints handling over 2006/07 was the introduction of a new Customer Information System, which saw resources, initially directed to training, then introduction followed by a “settling in” period. The impact on complaints reflects this process, including:

- use of contract staff while permanent staff were trained in the system and thus (with less experienced and skilled staff) an increase in complaints;

## 11.3 Details of Compliance

**Table 11-1 Licence Section 12 – Complaint and Dispute Handling**

Clause	Requirement	Compliance	Findings
<b>11.2</b>	<b>What the Audit is to Report on</b>		
11.2.1(j)	.... prepare a report on the effectiveness of Hunter Water's internal complaints handling process under clause 12.1 and ..... external dispute resolution scheme under clause 12.2	High compliance	<p>Hunter Water demonstrated that it operates an effective complaints handling process, which embraces the principles of the respective Australian Standard for complaints handling (AS 4269-1995). It uses two systems to log customer complaints, depending on the nature of the complaint. Those relating to water, sewerage and drainage services are reported on the Asset and Operations Maintenance System (AOMS) and all other complaints are reported on the Complaints Management System (CMS).</p> <p>Hunter Water demonstrated initiative in seeking to improve its systems (CIS), although the introduction of a new billing system generated considerable rise (see below) in the number of complaints in this area and masked improvements in operational areas.</p> <p>The complaints are classified by categories, as set out in the Operating Licence (Section 12.1.6). Monthly reporting on complaints is provided to Hunter Water managers and quarterly reporting to the Consultative Forum. Hunter Water has monitoring processes in place to measure 'effectiveness' and regularly reports to senior management and its customers on its performance.</p> <p>Further detail on the procedures implemented by Hunter Water to monitor and improve the complaints handling process is provided in Section 11.4 of this report.</p> <p>The total number of complaints in 2006/07 fell by 9% (compared to 2005/06), and the 3 largest of the 22 complaint categories accounted for over 60% of all complaints. Each of the three largest categories performed quite differently over 2006/07 (as compared to 2005/06). For example, <i>Billing Enquiries</i> 956 (742) was up 30%, <i>Operational Maintenance</i> 227(381) down 40% and <i>Metering</i> 192 (204) down 8%.</p> <p>The introduction of a new billing system and a Customer Information System resulted in an increase in complaints. Whilst Hunter Water demonstrated that the complaint levels have now recovered to pre-CIS levels, the new system and its introduction have impacted on the</p>

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levels of customer complaints and satisfaction. A recommendation in this regard has been made earlier (see Section 5 Customer and Consumer Rights) and has equal bearing on Hunter Water's performance under these clauses.

Importantly, Hunter Water received few complaints under the health categories of *Water quality, pressure and continuity*.

Hunter Water also undertakes fortnightly surveys of its customer contacts to the Call Centre. A review of the July 2007 report to senior management indicated that, on average, Hunter Water achieved its "Customer Satisfaction" target of 80% for the first half of the year (84%) but from January to April, 2007 dropped below target as a consequence of the new billing system. It was also noted that in the latter part of the audit period:

- ▶ the number of calls exceeded the budgeted resources to receive the calls;
- ▶ delays were experienced in answering calls;
- ▶ There were increased abandoned and unresolved calls; and
- ▶ the speed of answering calls decreased from 80% to 40% of calls answered within 15 and 30 seconds, and abandoned calls were more than double the target in June 2007.

Factors affecting performance are provided in Section 11.5 of this report.

An independent perception survey is conducted every two years. The "*2007 Domestic Customer Perception Survey – Executive Summary*", dated 11 September 2007, concluded that:

*"Hunter Water continues to be rated highly by domestic customers...Although the proportion rating Hunter Water 'excellent/good' is down marginally from 77%-75%, this satisfaction rating is still within reach of 80% KPI target set for the organisation."*

Further, that the drop in satisfaction related to a "*softening for management and office service staff*".

Thus, whilst Hunter Waters 'excellent to good' rating has shown an improving trend from 40% in 1989, the recorded satisfaction level of 77% is below the KPI target of 80%. The "Recommended Actions" in the report relate to improving communication efforts, public profile and public education as opposed to actually enhancing management and office services

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... external dispute resolution scheme under clause 12.2.		In relation to the external dispute resolution scheme, the Customer Contract and Complaints Report indicated that over the year a total of 124 contacts were made to EWON and 10 were carried over from 2005/06. These contacts consisted of: 34 enquiries, 74 complaints resolved (compared to 65 in 2005/06) and 16 complaints unresolved (7 in 2005/06). Recognising the increase in internal billing complaints over 2006/07, the escalation of complaints requiring external (EWON) involvement is considered acceptable.	
11.2.1(k)	...Complaints made against Hunter Water to a Court or Tribal under Clause 12.3	No requirement	Hunter Water advised that there have been no complaints to a Court or Tribunal during this audit period.

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- the new Billing system was introduced in the New Year and the lack of customer familiarity with the new water bills, saw the number of complaints rise (often above the resource/staffing thresholds) and satisfaction levels fall over the first quarter;
- progressively Hunter Water was able to return to the complaint/satisfaction levels exhibited prior to the introduction of the CIS; and
- the impact of the new billing system saw a decrease, over the year, of some 50% in the percentage of calls answered within targets (15 and 30 seconds) and a fivefold increase (from 2% to 10%) of abandoned calls to twice the target (vis, 5%) at years end.

There is an expectation that the introduction of any new system will introduce 'change' and that 'change' may be reflected in initial increases in the number of complaints and a reduction in complaint management performance. It is expected that the improved efficiency or effectiveness of the system will be demonstrated in 2007/08.

Hunter Water has an active and efficient complaints monitoring system, which enabled it to identify and then respond to the unfavourable trends resulting from the introduction of the new CIS. Assessment of the improvements brought by the CIS should be a focus of the 2007/08 operational audit.

Hunter Water reported that factors affecting the performance of its call centre, over the latter part of the audit period, included:

- ▶ introduction of and customer reaction to the new CIS System;
- ▶ approximately 9,500 payment demands were forwarded in June 2006 increasing the number of calls to the call centre; and
- ▶ weather conditions, particularly the June 2007 storm event that saw a reversal in performance, from February 2007, in the speed of answering and number of abandoned calls.

Hunter Water's performance in response to the June 2007 rainfall is deserving of further comment. This flood event was assessed as being in the order of a 1:500 year event and resulted, on the Saturday morning, in over 5,000 properties being without water and over 70 wastewater pump stations being without power. By Sunday evening water was restored to all properties and customers reporting problems, not resolved over the weekend, were contacted and kept informed of progress. The magnitude of the event meant Hunter Water did not meet its Licence requirements for water continuity (see Section 7 for further details). The response of Hunter Water to the event resulted in the prevention of cross contamination between sewer and water services, and was formally acknowledged by the Chief Executive Hunter New England, NSW Health (16 July 2007, see Appendix F):

*" The phenomenal effort made to ensure safe water to our communities during a very challenging period clearly contributed to preventing potential outbreaks of water-borne infectious diseases."*

A recommendation acknowledging this achievement has previously been made in Section 7.

A further point of recognition is also worth noting relating to Hunter Water's invitation and recognition, by the Water Services Association of Australia, to provide a session on 'Credit and Collection' at the IWA-WSAA Customer Service Benchmarking Best Practice Workshop in September 2007.

## **11.6 Recommendations**

It is recommended that Hunter Water:

- R11.1 Investigate and report to the Consultative Forum on the efficiencies that the new Customer Service Information system has delivered since its introduction, including recommendations to improve the *speed of answering* and *abandoned calls*, and the future role of the CIS.

## **11.7 Secondary recommendations**

Nil.

## Appendix A

# Comparison of Hunter Water's Compliance Over Previous Years

## Comparison of Hunter Water's compliance over previous years

This Appendix provides a tabular comparison of the compliance levels attained by Hunter Water in the 2006/07 Audit period and over the three previous audit periods. Table A-1 provides a summary of the assessment of compliance with each auditable requirement of the Operating Licence.

It is evident from Table A-1 that, for the auditable Licence conditions for the 2006/07 audit period, Hunter Water has:

- ▶ Overall applied its resources effectively and continued to achieve, predominantly, Full compliance;
- ▶ continued to achieve Full compliance for its *Customer and Consumer rights*, including *Customer Contract, Consumer and Codes of Practice and the Consultative Forum*;
- ▶ continued to achieve Full compliance with all *Drinking Water Quality* requirements, with the exception of the requirement to provide a monthly summary of monitoring results to the Public, for which it achieved High compliance;
- ▶ continued to achieve Full compliance with the *System Performance* requirements apart from a drop from Full to High compliance in relation to its *Water Continuity Standard*. Compliance improved from Low to High for performance reporting;
- ▶ continued to achieve Full compliance with all *Water Demand and Supply Indicators*;
- ▶ continued to achieve Full compliance with all *Environmental – Indicators and Plan* requirements;
- ▶ achieved Full compliance with all *Catchment Management* requirements; with the exception of the Catchment Report, for which compliance was High;
- ▶ achieved overall High compliance under “*What the Audit is to Report on*” (Clause 11.2) in regard to *Complaint and Dispute Handling*, although compliance was Moderate in relation to reporting on the effectiveness of Hunter Water's complaint and dispute handling schemes.

**Table A 1 Operating Licence - Summary of Compliance Over the Last Four Years**

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
<b>Part 5. Customer and Consumer Rights</b>					
<b>5.1. Customer Contract</b>					
5.1.1	The Customer Contract – rights and obligations	NR	NR	NR	NR
5.1.2	Applicability of the Customer Contract	NR	NR	NR	NR
5.1.3	Customer Contract posted on Hunter Water's website	FULL	FULL	FULL	FULL
5.1.4	The Customer Contract may only be varied in Accordance with the Act	NR	NR	NR	FULL
5.1.5	Review of the Customer Contract	NR	NR	NR	NR
5.1.6	Contract review must have regard to system performance standards	NR	NR	NR	NR
5.1.7	Findings and recommendations of the review to be provided to the Minister	NR	NR	NR	NR
5.1.8	Hunter Water to issue a new Customer Contract that addresses the recommendations of the review report	NR	NR	NR	FULL
5.1.9	Hunter Water must prepare a summary pamphlet of the Customer Contract within 3 months of review	NR	NR	NR	FULL
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	NR	FULL	FULL	HIGH
5.1.11	Hunter Water to enter into other contracts or arrangements for the supply of Services	NR	NR	NR	NR
<b>5.2. Consumers</b>					
5.2.1	Fulfilment of obligations under the Customer Contract relating to complaint handling and complaint resolution	FULL	FULL	FULL	FULL
5.2.2	Fulfilment of obligations under the Customer Contract relating to debt and disconnection procedures	FULL	FULL	FULL	FULL
<b>5.3. Code of Practice and Procedure on Debt and Disconnection</b>					
5.3.1	Development of code of practice and procedure on debt and disconnection	NR	NR	NR	NR

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
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	NR	HIGH	FULL	FULL
5.3.3	Rights and obligations in the Code are incorporated into the Customer Contract	NR	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	FULL	HIGH	FULL
<b>5.4. Consultative Forum</b>					
5.4.1	Establishment of Consultative Forum	FULL	FULL	FULL	FULL
5.4.2	Using the Forum consistent with the Consultative Forum Charter	FULL	FULL	FULL	FULL
5.4.3	A Consultative Forum must be established within 6 months of the Commencement date.	NR	NR	NR	NR
5.4.4	Forum and its membership prior to commencement date	NR	NR	FULL	FULL
5.4.5	Hunter Water must at all times appoint the members of the Consultative Forum.	FULL	FULL	FULL	FULL
5.4.6	Representing the community in membership of the Consultative Forum	HIGH	FULL	FULL	FULL
5.4.7	Development of a Consultative Forum Charter	NR	NR	NR	FULL
5.4.8	Hunter Water providing information to the Consultative Forum	HIGH	FULL	FULL	FULL
5.4.9	Availability of the Consultative Forum Charter to the public	FULL	FULL	FULL	FULL
5.4.10	Reporting on operations of Consultative Forum and the development of the Consultative Forum Charter.	FULL	FULL	FULL	FULL
5.4.11	Evaluation and reporting on effectiveness of the Consultative Forum and compliance with the Consultative Forum Charter.	NR	NR	NR	NR
<b>Part 6. Water Quality</b>					
<b>6.2. Drinking Water Quality – Standards</b>					
6.2.1(a)	Hunter Water must comply with the Drinking water guidelines as specified by NSW Health	FULL	FULL	FULL	FULL
6.2.1(b)	Hunter Water must comply with the Drinking water guidelines relating to aesthetic guidelines	FULL			
6.2.2	Inconsistencies between the Health Guideline and Drinking water Guidelines	NR	NR	NR	NR

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
6.2.3	Regard for the concepts of risk minimisation practices and system management of public water supplies.	FULL	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	FULL
<b>6.3. Drinking Water Quality – Monitoring</b>					
6.3.1	Prepare an Annual Comprehensive Water Quality Monitoring Plan by 30 April each year	FULL	FULL	FULL	FULL
6.3.2	The Monitoring Plan must provide for performance monitoring, regular sampling, lab testing and processes for quality control.	FULL	FULL	FULL	FULL
6.3.2(a)	The monitoring of water quality must include health and aesthetic parameters as per clause 6.2.1 (a) and (b)	FULL			
6.3.2(b)	The monitoring of water quality must include parameters for bulk water as specified in schedule 3.	FULL			
6.3.3	The sampling frequency and the locations chosen for the monitoring should be representative of water quality	FULL	FULL	FULL	FULL
6.3.4	Undertake Drinking water quality monitoring	FULL	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	FULL	FULL	FULL	FULL
<b>6.4. Drinking Water Quality – Reporting</b>					
6.4.1	Monthly summary of Hunter Water's water quality monitoring results to be made available to the Public	HIGH	FULL	FULL	FULL
6.4.2	Produce Annual Water Quality Report comparing actual Drinking water quality against the Drinking water guidelines	FULL	FULL	FULL	FULL
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	HIGH	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	FULL
<b>6.5. Drinking Water Quality - Planning</b>					
6.5.1	Hunter Water must maintain, a Five-Year Water Quality Management Plan.	FULL	NR	NR	FULL

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
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	NR	NR	FULL
6.5.3	Hunter Water must prepare, an Annual Water Quality Improvement Plan for the Water supply system by 31 March each year	NR	NR	FULL	FULL
6.5.4	The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Licence	FULL	FULL	FULL	FULL
6.5.5	The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Licence	NR	NR	NR	NR
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	FULL
6.5.7	Maintaining an Incident Management Plan	HIGH	HIGH	FULL	FULL
6.5.8	Incident Management Plan to contain procedures and protocols for the coordinated management of Drinking water incidents.	FULL	HIGH	FULL	FULL
<b>6.6. Other Grades of Water</b>					
6.6.1	Other Grades of water supplied must be supplied according to relevant guidelines and requirements	FULL	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	NR	NR	NR	NR
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	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	FULL
<b>6.7. Environmental Water Quality</b>					
6.7.1	Reporting performance against any environmental water quality requirements for any discharges or water releases required by Licences	FULL	FULL	FULL	FULL
<b>Part 7. System Performance</b>					
<b>7.2. Interpretation</b>					
<b>Commencement and cessation of a Water interruption</b>					
7.2.1	Water Interruption incidents as defined by Hunter Water and relevant authorities.	FULL	NR	NR	NR

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
<b>Commencement and cessation of a Pressure incident</b>					
7.2.2	Application of Clause 7.2.1 (a) and (c) to Pressure incidents	FULL	NR	NR	NR
<b>Commencement and Cessation of Sewage overflows</b>					
7.2.3	Application of Clause 7.2.1 (a) and (c) to Uncontrolled sewage overflow	FULL	NR	NR	NR
<b>7.3. System Performance Standards</b>					
<b>Water Continuity Standard</b>					
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)	HIGH	FULL	FULL	NON
<b>Water Pressure Standard</b>					
7.3.2	No more than 4,800 Properties in a year experience one or more pressure incidents	FULL	FULL	FULL	FULL
<b>Sewage Overflows Standard</b>					
7.3.3	Hunter Water must ensure that the number of Uncontrolled sewage overflows does not exceed 6,500.	FULL	FULL	FULL	FULL
<b>7.4. Reporting on System Performance</b>					
<b>Reporting on Water Interruptions</b>					
7.4.1	Hunter Water must report on the number of Properties that experience a water interruption	FULL	FULL	FULL	FULL
<b>Reporting on Water Pressure</b>					
7.4.2	Report on the number of Properties that experience one or more Pressure incidents	FULL	FULL	FULL	FULL
<b>Reporting on Sewage Overflows</b>					
7.4.3	Report on the number of Uncontrolled sewage overflows in dry weather or wet weather	FULL	FULL	FULL	FULL
<b>Publication of Reports</b>					
7.4.4	Reports must be made freely available to the Public.	HIGH	LOW	FULL	FULL
<b>7.5. System Performance Indicators</b>					
7.5.1	Schedule 4 applies	FULL	NR	NR	NR
7.5.2	Report performance against the system performance indicators in Schedule 4 and make publicly available	FULL	LOW	FULL	FULL

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
<b>7.6. Keeping of Records on Water Interruptions, Low Pressure and Sewage Overflows</b>					
7.6.1	Maintain records necessary to meet Licence obligations and Schedule 4	FULL	FULL	FULL	FULL
7.6.2	Maintain records of Water interruptions, Pressure incidents and Sewage overflows	FULL	FULL	FULL	FULL
<b>7.7. Report on Low Pressure Areas</b>					
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	NR	NR	NR	NR
<b>Part 8. Water Demand and Supply</b>					
<b>8.2. Interpretation</b>					
8.2.1	Definition describing references to options developed under the integrated water resources plan	NR	NR	NR	NR
<b>8.3. Integrated Water Resources Plan Development of the Plan</b>					
<b>Development of the Plan</b>					
8.3.1	Develop an Integrated Water Resources Plan.	NR	NR	NR	FULL
8.3.2	Develop a draft of the Plan by 30 September 2002, and make available to the Public for 28 days	NR	NR	NR	FULL
8.3.3	Must engage in Public consultation complete the Plan by 1 March 2003.	NR	NR	NR	FULL
8.3.4	The Plan must be made freely available the Public	FULL	FULL	FULL	FULL
8.3.5	Regularly review the Plan	FULL	FULL	FULL	NR
8.3.6	Report any amendments	FULL	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.	FULL	FULL	FULL	FULL
8.3.8	IPART must evaluate and report on the outcomes achieved by the Plan.	NR	NR	NR	NR
<b>Content and Methodology of the Plan</b>					
8.3.9	The Plan must enable Hunter Water to respond to water needs in the Area of Operations	NR	NR	NR	FULL
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	NR	NR	NR	FULL

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
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	NR	NR	NR	FULL
8.3.12	The Plan must make projections of the total demand for water	NR	NR	NR	FULL
8.3.13	Hunter Water must utilise Present value calculations	NR	NR	NR	FULL
<b>Identifying the Options and Associated Costs</b>					
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.	NR	NR	NR	FULL
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.	NR	NR	NR	FULL
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.	NR	NR	NR	FULL
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	NR	NR	NR	FULL
<b>Results of the Plan</b>					
8.3.18	Outline targets, standards, indicators or other proposals for consideration as part of the Licence review	NR	NR	NR	FULL
<b>Annual Reporting on the Plan</b>					
8.3.19	Report performance against the Plan.	FULL	FULL	FULL	FULL
<b>8.4. Water Conservation Target</b>					
8.4.1	Calculation of the five year rolling average for annual residential water consumption	FULL	FULL	FULL	FULL
8.4.2	Report compliance with Water conservation target	FULL	FULL	FULL	FULL
8.4.3	Comply with conservation target until replaced	FULL	FULL	FULL	FULL
<b>8.5. Water Demand and Supply Indicators</b>					
<b>Security of Supply</b>					
8.5.1	Impose Water restrictions only as approved by the Minister	NR	NR	NR	NR

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
8.5.2	Reporting on Water restrictions imposed in a Reporting period	NR	NR	NR	NR
8.5.3	Report on water restriction criteria	NR	NR	NR	NR
8.5.4	Report on the quantity of water supplied from each Water storage	FULL	HIGH	FULL	FULL
<b>Losses from the Water System</b>					
8.5.5	Report against each component in the Water balance table consistent	FULL	FULL	FULL	FULL
8.5.6	Reporting differences in the outcomes in applying clause 8.5.5 between Reporting periods	FULL	FULL	FULL	FULL
<b>Recycled Water</b>					
8.5.7	Report on the quantity of Recycled water supplied in a Reporting period for all applications	FULL	FULL	FULL	FULL
<b>Demand Management</b>					
8.5.8	Report on the total quantity of water supplied for all customers	FULL	FULL	FULL	FULL
8.5.9	Comparing applications in 8.5.8, with the preceding Reporting period, and indicate factors contributing to change	FULL	HIGH	FULL	FULL
<b>8.6. Annual Reporting on Water Demand and Supply Indicators</b>					
8.6.1	Report performance against the water demand and supply indicators	FULL	FULL	FULL	FULL
8.6.2	Publicly display the report	FULL	FULL	FULL	FULL
<b>Part 9. Environment – Indicators and Plan</b>					
<b>9.1. Environmental Management Plan</b>					
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.	NR	NR	NR	NR
9.1.2	Hunter Water must engage in public consultation in developing the EMP.	NR	NR	NR	NR
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.	NR	NR	NR	HIGH
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.	NR	NR	FULL	FULL
9.1.5	Material amendments may only be made to the EMP following public consultation.	FULL	NR	NR	NR

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
9.1.6	Hunter Water must report on any material amendments made to the EMP	FULL	NR	NR	NR
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	FULL
<b>9.2. Environmental and ESD Indicators</b>					
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	FULL
9.2.2	Hunter Water must develop a draft list of environmental and ESD indicators within three months of the Commencement date.	NR	NR	NR	NR
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.	NR	NR	NR	NR
9.2.4	The environmental and ESD indicators developed by Hunter Water must be consistent with the scope and objectives of the EMP.	NR	NR	NR	NR
9.2.5	The draft list of environmental and ESD indicators developed by Hunter Water must undergo public consultation	NR	NR	NR	NR
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.	NR	NR	NR	NR
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.	NR	NR	FULL	NR
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	FULL	FULL	HIGH
9.2.9	The environmental and ESD indicators must be reviewed as part of the Licence review.	NR	NR	NR	NR
<b>9.3. Energy Management</b>					
9.3.1	Hunter Water must participate in the Energy Smart Business Program, or similar program administered by SEDA.	FULL	FULL	NR	HIGH



2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
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	NR	FULL
<b>Part 10. Catchment Management</b>					
<b>10.1. Catchment Report</b>					
10.1.1	Report performance in the Catchment Report	MOD	FULL	FULL	FULL
10.1.1a	Report against bulk water quality parameters	FULL	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	MOD	FULL	FULL	HIGH
10.1.1c	Report details of performance against the Water Management Licence and the Dam Safety Act 1978	FULL	FULL	FULL	HIGH
10.1.1d	Report against other catchment, landcare and supporting activities by or on behalf of Hunter Water	MOD	FULL	FULL	HIGH
10.1.1e	Report against five year trends observed in the Williams River across five specified key water quality indicators	FULL	FULL	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	FULL
<b>Part 12. Complaint and Dispute Handling</b>					
<b>12.1. Internal Complaint Handling Procedures</b>					
12.1.1	Establish internal complaints handling procedures	Refer to 11.2	Refer to 11.2	FULL	FULL
12.1.2	The internal complaints handling procedures must be based on the Australian Standard AS4269- 1995 Complaint Handling.	Refer to 11.2	Refer to 11.2	FULL	FULL
12.1.3	Hunter Water must make available to Customers and Consumers information concerning its internal complaints handling procedures	Refer to 11.2	Refer to 11.2	FULL	FULL
12.1.4	Hunter Water must provide information about making complaints in bills at least once each year.	Refer to 11.2	Refer to 11.2	FULL	FULL

2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
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.	Refer to 11.2	Refer to 11.2	HIGH	HIGH
12.1.6	Reporting on details concerning complaints made against Hunter Water to IPART	Refer to 11.2	Refer to 11.2	FULL	FULL
<b>12.2. External Dispute Resolution Scheme</b>					
12.2.1	Establishment of a Dispute Resolution Scheme	Refer to 11.2	Refer to 11.2	NR	NR
12.2.2	The Dispute Resolution Scheme so established by Hunter Water is subject to the Minister's approval.	Refer to 11.2	Refer to 11.2	NR	NR
12.2.3	Issues for complaints made to the Dispute Resolution Body	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.4	The Dispute Resolution Scheme must comply with the minimum standards	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.5	Features of the Dispute Resolution Scheme	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.6	Pamphlet explaining how the Dispute Resolution Scheme operates and how it can be accessed.	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.7	Hunter Water must provide the pamphlet to Customers and Consumers through their bills at least once each year.	Refer to 11.2	Refer to 11.2	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.	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.9	Contents of report on Dispute Resolution Body by Hunter Water	Refer to 11.2	Refer to 11.2	FULL	FULL
12.2.10	Public display of the report	Refer to 11.2	Refer to 11.2	FULL	FULL
<b>12.3. Complaints to Other Bodies</b>					
12.3.1	Hunter Water must report on complaints made against Hunter Water to a court or tribunal	Refer to 11.2	Refer to 11.2	FULL	FULL
<b>11.2. What the Audit is to Report on</b>					
11.2.1(h)	... investigate and report on-going compliance with its Customer Contract and specific areas of non-compliance.	HIGH	HIGH		



2002-2007 Operating Licence			Previous Audits		
Licence Clause	Summary of Requirement	2006/07	2005/06	2004/05	2003/04
11.2.1(i)	... investigate and report on-going Hunter Water's Compliance with its code of practice and procedures on debit and disconnection under Clause 5.3 and any similar initiatives developed by Hunter Water.	FULL	HIGH		
11.2.1(j)	.... prepare a report on the effectiveness of Hunter Water's internal complaints handling process under clause 12.1 and external dispute resolution scheme under clause 12.2	HIGH	HIGH		
11.2.1(k)	.... prepare a report on Complaints made against Hunter Water to a Court or Tribal under Clause 12.3	NR	NR		
11.2.2(a)	IPART or any person preparing the Annual Audit must investigate and prepare a report on.... Hunter Water's implementation of any Memorandum of Understanding referred to in Clause 3.3.	HIGH	MOD		
	Department of Health (formerly NSW Health)	HIGH	MOD		
	EPA (Now DECC)	NR	NR		
	DLWC (Now DNR)	NR	NR		

**Table A2** provides a summary of compliance levels reached by Hunter Water in the 2006/07 Audit period for the Ministerial requirements. Ministerial requirements are usually specific to each operating year and hence yearly comparisons with previous operational audits are not applicable for a number of requirements.

**Table A 2 Ministerial Requirements - Summary of Compliance**

Directive No.	Summary of Requirement	2006/07
<i>Summary of Ministerial requirements arising from 2004/05 Operational Audit</i>		
<b>2003/04</b>		
MR5.1	Hunter Water is to continue to look at ways at reducing the number of customers affected by disconnection and flow restrictions measures for non-payment.	<b>FULL</b>
MR7.1	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 requirements	<b>FULL</b>
MR7.3	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  Return the trunk main to service, resupplying customers affected	<b>FULL</b>
<b>2004/05</b>		
MR7.5	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 failures more quickly to both minimise the number of customers affected and repair and return the main to service.	<b>NR</b>
MR7.6	Increase the awareness of its work crews as to the importance of endeavouring to reconnect customers within five hours of a discontinuity event.	<b>FULL</b>
<b>2005/06</b>		
MR 5.1	Hunter Water is to continue to look at ways at reducing the number of customers affected by disconnection and flow restrictions measures for non-payment.	<b>FULL</b>
MR 7.1	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 failures more quickly to both minimise the number of customers affected and repair and return the main to service.	<b>NR</b>
MR 7.2	Increase the awareness of its work crews to the importance of endeavouring to reconnect customers within five hours of a discontinuity event.	<b>NR</b>
<b>2006/07</b>		
N/A	Endorsement of IPARTs recommendation that Hunter Water develop a summary table for water saving initiatives. For 2006/07 this was to identify expenditure and savings achieved for the year and key reasons for performance.	<b>FULL</b>



Directive No.	Summary of Requirement	2006/07
	<p>Endorsement of auditor recommendations that Hunter Water:</p> <ul style="list-style-type: none"><li>▶ Ensure improved accessibility to required system performance information in its new website; and</li><li>▶ Train its customer service staff to improve awareness of the availability of system performance information.</li></ul> <p>Both of the auditor recommendations were to be achieved by August 2007.</p>	<b>FULL</b>

## Appendix B

# Audit Brief



## **Request for Tender**

### **RFT No W03/2007 – W05/2007**

Operational Audit of Sydney Water Corporation

RFT W03/2007

Operational Audit of Hunter Water Corporation

RFT W04/2007

Operational Audit of the Sydney Catchment Authority

RFT W05/2007

#### **IMPORTANT NOTE**

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

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

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

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## **1. Introduction**

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

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

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

The conditions of Tender are set out in this RFT.

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

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

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

---

## **2. Application of these Conditions of Tender**

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

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

---

## **3. Communications with Tenderers**

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

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

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

---

## **4. Format of Tender**

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

## 5. Lodgement and Opening of Tenders

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

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

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

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

Tenders must be addressed to:

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

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

At        P O Box Q290  
            QVB Post Office  
            NSW 1230

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

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

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

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

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

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## **6. Non-Compliance/Late Tenders**

Any tender not complying with this RFT.

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

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

---

## **7. Consultancy Agreement**

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

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

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

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

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

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

---

## **8. Validity and Withdrawal**

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

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

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## **9. Clarification of Tenders**

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

---

## **10. The Negotiation Stage**

This clause is subject to clause 22.

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

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

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

---

## **11. Award of Agreement**

This clause is subject to clause 22.

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

---

## **12. Amendments to RFT**

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

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

- a) vary or deviate from the processes as set out in this RFT;
- b) terminate or vary the RFT process;
- c) add to, vary or amend this RFT and the conditions in this RFT;
- d) require additional information from any tenderer;
- e) change the structure and timing of the RFT; and
- f) amend the scope of the Services required by the Tribunal in Schedule 1.

---

### **13. Tenderers to bear own costs and risk**

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

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

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

---

### **14. Acceptance of Tenders**

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

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### **15. No obligation to accept tenders and part tenders**

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

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

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### **16. Access to further information**

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

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### **17. Contact of Referees**

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

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### **18. Interviews**

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

## 19. Confidentiality and Privacy

In this document:

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

- (a) information which is at the date of this RFT, or which subsequently becomes into the public domain other than as a result of disclosure by a tenderer, or a person receiving the confidential information from the tenderer, in breach of the conditions of this RFT;
- (b) information which a tenderer can establish by written records is at the date of this document already known to that person; or
- (c) information which a tenderer can establish to the Tribunal's satisfaction, was developed independently of the Tribunal or any agent or employee of the Tribunal.

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

- (a) acknowledges and agrees that any confidential information is secret and confidential and that any confidential information disclosed by the Tribunal to the tenderer is disclosed to the tenderer only for the purpose of this RFT and in reliance on, and pursuant to, the terms of the conditions of this RFT;
- (b) agrees to keep the confidential information secret and confidential at all times;
- (c) must not, without the prior written approval of the Tribunal, use, disclose, divulge or deal with any confidential information, nor cause, permit or allow any act, matter or thing to be done, omitted or occur whereby any confidential information may become known or be used by, or be disclosed or communicated to, any other person, except strictly in accordance with the terms of the conditions of this RFT; and
- (d) must return to the Tribunal or destroy all copies of the confidential information upon written demand by the Tribunal or upon the withdrawal of the tenderer from the RFT;

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

- (a) details of the Consultancy Agreement (including a description of Services to be completed, the term of the Consultancy Agreement, the commencement date and anticipated completion date);
- (b) the full identity of the successful tenderer;

- (c) the price payable by the Tribunal and the basis for future changes in this price; and
- (d) the significant evaluation criteria and the weightings used in this RFT.

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

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

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## **20. Intellectual property**

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

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

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## **21. Disclaimer**

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

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

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

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

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## **22. Other Reservations**

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

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

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

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

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

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

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## **23. Tenderer's duty to inform themselves fully**

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

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

Tenderers must only rely on written advice from the Tribunal.

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## **24. Briefing for interested persons**

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

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

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## **25. Supporting material**

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

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

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## **26. Improper assistance in Tender preparation**

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

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

---

## **27. Conflict of interest**

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

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

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

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

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## **28. Collusive bidding**

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

---

## **29. Use of documents and information provided**

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

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

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

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### **30. Freedom of Information**

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

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

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

the tenderer's financing arrangements;

the tenderer's cost structure and profit margins; and

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

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

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### **31. Assignment**

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

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### **32. Whole Agreement**

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

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### **33. Relationship**

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

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### **34. Warranty to the Tribunal**

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

---

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

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

---

### **36. Electronic document**

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

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## Schedule 1 Services Required

### 1. Services

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

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

#### Objectives of Consultancy

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

#### Risk-Based Audits

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

#### Detailed Scope of Work

##### Operational Audits

In undertaking the operational audits, the auditor must:

- a) conduct a detailed examination of those utility activities that are regulated by the Operating Licence, subject to the Tribunal's risk-based audit approach, where applicable;
- b) assess the level of compliance achieved by the utility against each of the requirements of the Operating Licence set out in the Tribunal's risk-based audit procedure, providing detailed supporting evidence for this assessment and reporting compliance according to the Tribunal's established compliance scoring methodology, set out in Schedule 6;
- c) assess and report on progress by the utility in addressing any comments made by the relevant portfolio Minister pertaining to previous audits, providing supporting evidence for these assessments. This correspondence will be provided to the successful tenderer;
- d) for each section of the Operating Licence that is to be audited, identify factors (if any) that have affected the utility's performance for the period from 1 July 2006 to 30 June 2007. This includes verifying the calculation of performance indicators associated with relevant requirements of the operating licences and undertaking an assessment of any underlying trends in performance arising from these indicators. Make recommendations to the Tribunal on how the utility can improve its performance in the future, based on the audit assessment;

- e) provide a formal briefing to the Tribunal or the Tribunal's Secretariat comprising an overview of the utility's overall performance against the requirements of the Operating Licence and the key findings of this assignment; and
- f) prepare a full report on the findings of the assignment, including a summary of the utility's overall performance against the audited obligations of the Operating Licence and detail of its compliance with each audited obligation of the Operating Licence and any requirements of the Minister in Attachment 1.

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

Utility	Issue
Sydney Water	<ul style="list-style-type: none"> <li>• Risk based audit to be introduced.</li> <li>• Leakage Minimisation Program</li> <li>• Readiness of pumps (eg maintenance and testing) required for contingent raw water sourced from Prospect Reservoir</li> </ul>
Hunter Water	<ul style="list-style-type: none"> <li>• Drinking Water Continuity</li> <li>• Debt and disconnection</li> </ul>
SCA	<ul style="list-style-type: none"> <li>• Risk based audit to be introduced.</li> <li>• Inter-basin transfer raw water quality management</li> <li>• Storm Event Raw Water Quality management including Limnology Studies of Warragamba Dam and Prospect Reservoir</li> <li>• Conductivity fluctuation generally – environmental management</li> </ul>

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

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

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

### **NWI Indicators**

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

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

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

### **Outputs**

The main outputs from each audit are:

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

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

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

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

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

## Audit Process

The audit process for the tenderer is outlined as follows:

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

## Timing

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

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

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

## Proposal

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

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

## **2. Closing date for tenders**

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

### 3. Further Information

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

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

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

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

## Appendix C

# Operating Licence

# 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](http://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.



## NOTES



ACCOUNT & GENERAL ENQUIRIES

**1300 657 657**

24 HOUR EMERGENCY & SERVICE FAULTS

**1300 657 000**

VISIT OUR WEBSITE AT

**[www.hunterwater.com.au](http://www.hunterwater.com.au)**

DIRECT EMAIL ENQUIRIES TO

**[enquiries@hunterwater.com.au](mailto:enquiries@hunterwater.com.au)**



**BOOLAROO OFFICE**

143 MAIN ROAD  
OPPOSITE COUNCIL



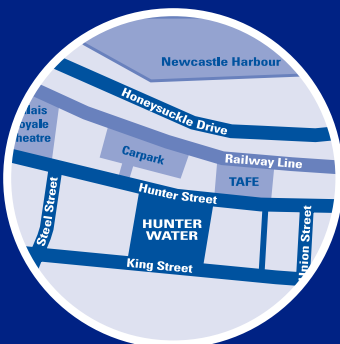
**CESSNOCK OFFICE**

16 VINCENT STREET  
WOLLOMBI ROAD END



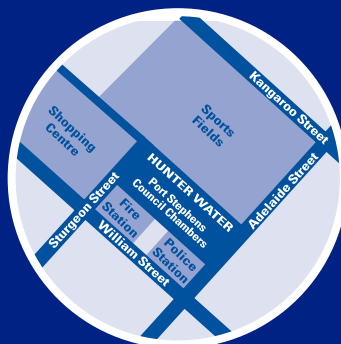
**MAITLAND OFFICE**

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 D

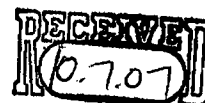
# Ministerial Requirements



New South Wales

**The Hon Nathan Rees MP**  
**Minister for Emergency Services**  
**Minister for Water Utilities**

Mr Ron Robson  
Chairman  
Hunter Water Corporation  
PO Box 5171  
HRMC NSW 2310



*D Brindley*

Dear Mr Robson

### **Operational Audit of Hunter Water Corporation 2005-2006**

I am writing to you in relation to the Operational Audit Report for Hunter Water Corporation covering the period 1 July 2005 to 30 June 2006. As the Minister responsible for overseeing the Corporation's performance against the requirements of the Operating Licence, I have considered the advice given by the Independent Pricing and Regulatory Tribunal on the Audit findings.

I am pleased to note that overall, the Audit revealed that Hunter Water performed strongly against the Operating Licence requirements, achieving full or high compliance with the majority of conditions. In particular, I note the auditor's finding that Hunter Water continued to supply excellent quality water throughout 2005-2006.

On the basis of the audit report and advice from the Tribunal, I have decided that no penalties will be imposed on the Corporation.

I understand that there is room for improvement with respect to several matters and I make the following comment.

While Hunter Water has initiated a number of positive water conservation programs, the Tribunal notes that progress on achieving water savings through Demand Management activities has been slow and that some of these programs appear to have reached a plateau in terms of effectiveness.

I share the Tribunal's view that the Corporation should revitalise its efforts in the area of water conservation initiatives. I endorse the Tribunal's recommendations that Hunter Water develop a summary table for water saving initiatives. For 2006-2007, this table should identify expenditure and savings achieved for the year and key reasons for performance. For later years, the table should identify annual budget, actual expenditure, the increase to targeted water savings increase, actual savings achieved for the year and key reasons for performance. I request that Hunter Water publish the table on its website.

The Tribunal has also advised me that Hunter Water has achieved full compliance with all requirements related to system performance standards. However, in

relation to making its reports available publicly, Hunter Water has achieved low compliance. To improve this, the auditor has recommended that:

"Hunter Water ensure that there is improved accessibility to required system performance information in its new website (Recommendation 7.3)

Hunter Water train its customer service staff to improve awareness of the availability of system performance information (Recommendation 7.4)."

I endorse these recommendations and request that Hunter Water take action to implement them by August 2007.

Please pass on my appreciation for Hunter Water's efforts over the past year. I thank you for the cooperation Hunter Water has given the auditors and IPART in the conduct of the Audit.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Nathan Rees', written in a cursive style.

**Nathan Rees**  
Minister for Water Utilities

Appendix E

## Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

BETWEEN

NSW DEPARTMENT OF HEALTH

AND

HUNTER WATER CORPORATION

Dated: 19 April 2002

## **Memorandum of Understanding Between NSW Health and Hunter Water Corporation**

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### **Introduction**

This Memorandum of Understanding has been prepared by the NSW Health Department and the Hunter Water Corporation.

The Memorandum is designed to outline the roles and responsibilities and to facilitate effective interaction between the two (2) organisations.

Copies of the Memorandum of Understanding between NSW Health Department and Hunter Water Corporation can be obtained from:-

- q the Hunter Area Health Service on [www.health.hunter.nsw.gov.au](http://www.health.hunter.nsw.gov.au); or
- q the NSW Health Department's Environmental Health Branch on Website [www.health.nsw.gov.au/public-health/ehb/water](http://www.health.nsw.gov.au/public-health/ehb/water); or
- q the Hunter Water Corporation on [www.hunterwater.com.au](http://www.hunterwater.com.au).

**MEMORANDUM OF UNDERSTANDING**

**THIS MEMORANDUM** is entered into on the ..... day of  
..... 2002.

**BETWEEN THE HUNTER WATER CORPORATION** (the Corporation)

**OF THE ONE PART**

**AND THE NSW HEALTH DEPARTMENT** (the Department)

**OF THE OTHER PART**

**Context**

- A. The Corporation is a statutory state owned corporation (*SOC*) under the State Owned Corporations Act 1989. The Corporation has a responsibility to supply safe drinking water to its customers in accordance with its Operating Licence granted under the Hunter Water Act, 1991.
- B. The Department has a role in providing advice to the Government on standards in relation to drinking water quality and to commit the Corporation to supplying water which is safe to drink having regard to public health.
- C. The Minister of Health and the Director-General of the Department have certain responsibilities in relation to the protection of public health under the Public Health Act 1991 and other relevant legislation. The Department's roles and responsibilities as outlined in this Memorandum are in addition to any functions conferred upon the Department, the Director-General of the Department or the Minister of Health under the Public Health Act, 1991.
- D. The objective of this Memorandum is to formally set out the terms of a co-operative relationship between the parties, establish their respective roles and facilitate fulfilment of each party's function in relation to the protection of public health.
- E. It is recognised that the Independent Pricing and Regulatory Tribunal has a role in both setting the Corporation's prices and standards for services which takes into account community preferences including their willingness to pay or accept risk.

**Memorandum of Understanding Between  
NSW Health and Hunter Water Corporation**

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**1 Interpretation**

- 1.1 Unless otherwise specified, terms in this Memorandum shall have the same meaning as provided by the Act or the Operating Licence.
- 1.2 **Act** means the Hunter Water Act 1991.
- 1.3 **Department** refers to the NSW Health Department, but for practical purposes functions of the Department as specified in this MOU will be delegated to the Hunter Public Health Unit.
- 1.4 **Water Supply System** includes all those systems, from the catchment to the consumer's tap, utilised by the Corporation to supply drinking water in the Licence Area.
- 1.5 **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.
- 1.6 **Drinking Water Guidelines** means collectively the 1996 NHMRC and ARMCANZ Australian Drinking Water Guidelines and the Updated Guidelines.
- 1.7 **Updated Guidelines** means the 1996 Guidelines amended, updated or supplemented from time to time as specified by NSW Health.
- 1.8 **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.
- 1.9 **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.
- 1.10 **Potable Water Backflow Prevention Devices** are plumbing devices to prevent the reverse flow of water from a potentially polluted source into a potable water supply system.
- 1.11 Headings and numbering are for convenience only and do not affect the interpretation of this Memorandum.

**2 Term**

- 2.1 The term of this Memorandum shall be for the period commencing on the date of execution hereof and remaining in force for the term of the Corporation's Operating Licence which commences on 1 July 2002.

### 3 Liaison Between the Corporation and the Department

- 3.1 A Joint Operational Group shall be established consisting of the Director Hunter Public Health Unit, Senior Environmental Health Officer, Hunter Public Health Unit, Manager Water Unit (*as necessary*) of the Department and the Manager Planning & Development, Manager Strategic Operations and Manager Corporate Planning & Government Regulation (*as necessary*) of the Corporation (*or any other officers as agreed to by both agencies*) to discuss the broad principals, directions and policies underlying the roles and responsibilities of the parties under this Memorandum and to:-

- Å annually review progress on the implementation of this Memorandum;
- Å consider long term strategic issues and policies and to define and implement processes for the interchange of strategic planning information;

and specifically to

- Å co-ordinate implementation of this Memorandum;
- Å establish data sharing programs;
- Å establish programs of investigations, feasibility studies and economic analyses to be undertaken by the Corporation to meet changing public health objectives in relation to drinking water;
- Å make recommendations to the Director-General of NSW Health and the Managing Director of Hunter Water Corporation regarding the updating of this Memorandum; and
- Å facilitate co-ordination of the collection of data on water quality for use by all relevant agencies.

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

The Joint Operational Group will report their activities to the Director-General of NSW Health and the Managing Director of Hunter Water Corporation.

### 4 Dispute Resolution

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

**5      Amendment**

- 5.1      This Memorandum can be amended at any time upon agreement between the parties. Where agreement is not reached, the view of the Department is to prevail.

**6      The Corporation's Roles and Responsibilities**

- 6.1      The Corporation shall ensure that all drinking water it supplies is safe to drink having regard to the health of the public, and that it is supplied in accordance with its Operating Licence.

**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;
- (b) the Drinking Water Guidelines relating to the aesthetic guideline values as specified in the Operating Licence Clause 6.2.1 (b);

- 6.2.2      In delivering the Services, Hunter Water must have regard to the concepts of risk minimisation practices and system management of public water supplies in the 1996 Drinking Water Guidelines.

**6.3      *Drinking Water Quality - Monitoring***

- 6.3.1      Hunter Water must prepare, to the satisfaction of NSW Health, an Annual Water Quality Monitoring Plan for the Water Supply System. The plan is to be agreed with NSW Health **by 30 April each year**, for the duration of the Licence commencing 1 July 2002.

- 6.3.2      The Annual Water Quality Monitoring Plan for the Water Supply System must include system 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);
- (b) monitoring of samples in accordance with testing requirements of the 20<sup>th</sup> Edition (1998) of Standard Methods for Examination of Water and Wastewater published by the American Public Health Association, or other established methods as considered appropriate by NSW Health.

**Memorandum of Understanding Between  
NSW Health and Hunter Water Corporation**

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- 6.3.3 The Drinking Water Quality Monitoring Plan must assess the quality of Drinking water in Hunter Water's Water Supply System, and the raw water in the water storages. 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 for each financial year.
- 6.3.5 Hunter Water must monitor the raw water and initiate action to identify the source and stop further contamination where values are above the Guideline values.
- 6.3.6 Where the Guidelines recommend monitoring at a Customer's or Consumer's tap, the Corporation will 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.
- 6.3.7 The Corporation or its authorised agent shall fluoridate all drinking water supplies as required by the Fluoridation of Public Water Supplies Act 1957. Fluoride shall be sampled and reported in accordance with the requirements of the Fluoridation of Public Water Supplies Act 1957.

**6.4 *Drinking Water Quality - Reporting***

- 6.4.1 The Corporation shall submit to the Department:-
- (a) event-based monitoring;
  - (b) monthly, monitoring results as agreed in the Monitoring Plan together with an evaluation of the results on an exception basis;
- 6.4.2 Hunter Water must, each financial year, 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 characteristics. The Annual Water Quality Report must indicate water quality trends and problems, 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 September each year** and must be placed on Hunter Water's website on the internet and made available at its offices for access or collection by any person.

**6.5      *Drinking Water - Planning***

- 6.5.1      Hunter Water must prepare and maintain, to the satisfaction of NSW Health, a Five Year Water Quality Management Plan.
- 6.5.2      The Five Year Water Quality Management Plan must include strategies for the comprehensive management of all aspects of the supply cycle necessary to ensure quality of drinking water supplied to Customers and Consumers meets Operating Licence Requirements. The Plan should adopt the '*multiple barrier*' approach to protection of drinking water outlined in the Guidelines considering catchment management and bulk supply, treatment, disinfection and 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.
- 6.5.5      The Annual Water Quality Improvement Plan must be reviewed as part of any review of the Operating Licence to assess its continued effectiveness and whether there is a continued need for the plan each year.

**6.6      *Water Supplied For Other Uses***

- 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 conflict between any of the guidelines, requirements or standards applying to Hunter Water under Clause 6.6.1, the Minister of Health'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 supplied to those persons for purposes other than Water Treatment or human consumption. The terms of the arrangements must at minimum include:-
  - (a)      the standard of the quality of water supplied;
  - (b)      the purpose of the supply.

**Memorandum of Understanding Between  
NSW Health and Hunter Water Corporation**

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**6.7     *Other Responsibilities***

- 6.7.1   The Corporation shall provide the Department with all data and all information on the planning, design, maintenance, operation and administration of the Corporation's activities that the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.
- 6.7.2   The Corporation shall allow officers of the Department to enter any premises under its care and control, including facilities performing water supply, wastewater reuse, or wastewater treatment and disposal, for the purposes of carrying out any inspections or viewing any records which the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.
- 6.7.3   The Corporation, as a service provider, has a role in ensuring public health protection. This role must be recognised in any conflict or matters of mutual concern to both public health and environmental protection approaches, and will require consultation between the Corporation, the NSW Environment Protection Authority and the Department.

**7       The Department's Role and Responsibilities**

- 7.1     The Department shall provide general advice to the Corporation on matters regarding the supply of water which is safe to drink and on other public health issues in regard to water which relate to the Corporation's activities.
- 7.2     The Department shall maintain a Public Water Supply Regulatory Program for the purpose of making independent judgements on public health matters related to the Corporation's activities and exercising its powers and functions under the Public Health Act, 1991.
- 7.3     Where any drinking water supplied by the Corporation is failing to meet the Drinking Water Guidelines which the Corporation is required by its Operating Licence and Clause 6.2 to meet, or where the provision of drinking water, or the reuse, disposal, or treatment of wastewater takes place in such a manner that a hazard to public health may arise, the Corporation shall be responsible for assessing the problem and proposing rectification action. If the Department is of the opinion that it is appropriate to do so, it may provide advice on rectification action that may be taken by the Corporation. Where the Department gives any advice to the Corporation under this Clause, it shall be entirely the responsibility of the Corporation to take appropriate rectification action to ensure that: the drinking water it supplies is safe to drink and meets the requirements of the Corporation's Operating Licence and Clause 6.2; and that other activities conducted in a manner that do not pose a potential hazard to public health. For the purposes of this exercise, the Department will use the current NHMRC/ARMCANZ Australian Drinking Water Guidelines as in force for the time being for guidance in providing such advice in relation to drinking water.
- 7.4     The Department shall give such information to the Licence Regulator as the Licence Regulator requires, or the Department considers it appropriate to provide, for the purpose of the Licence Regulator exercising its functions.

**8. Emerging Public Health Issues Related to Drinking Water**

- 8.1 The parties shall co-operatively exchange information and the Corporation shall participate in appropriate research and development on emerging public health issues related to drinking water so as to enable them to make well informed judgements regarding action to be taken in relation to the Corporation's Water Supply System to maintain the protection of public health.
- 8.2 The parties shall independently provide input to public discussion and debate on future revisions of the NHMRC/ARMCANZ Australian Drinking Water Guidelines.

**9. Events of Public Health Significance**

- 9.1 The Corporation shall immediately report to the Department any information or event within its drinking water supply system, or within its wastewater reuse and wastewater treatment and disposal operations which may have significant implications for public health.
- 9.2 The report of information by the Corporation shall include maps depicting geographical locations and systems in addition to tables or text as required by the Department.
- 9.3 The parties shall maintain a comprehensive Incident Management Plan covering the Corporation's drinking water supply systems, wastewater reuse. The Incident Management Plan should include, where appropriate, reference to any Incident Management Plan developed between the Corporation and other agencies regarding wastewater treatment and disposal operations. The parties shall nominate a 24 hour Incident Management Control Point for the co-ordination of responses to any event of public health significance. The contact point will be an officer of each organisation who has been trained in the Plan and the Incident Management Procedures and Protocols thereunder. The Incident Management Plan shall contain procedures and protocols for the co-ordinated management of incidents including the notification of public health advice to customers, and media communication of public health information.
- 9.4 The parties shall ensure that all relevant personnel in their respective organisations are trained to respond to and execute the Incident Management Plan.

**10 Data Exchange**

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

**Memorandum of Understanding Between  
NSW Health and Hunter Water Corporation**

---

**IN WITNESS WHEREOF** the parties have executed this document at the date first mentioned.

**SIGNED** for and on behalf of the  
**NSW DEPARTMENT OF HEALTH**  
in the presence of

.....

**Director-General  
Department of Health**

.....

**SIGNATURE OF WITNESS**

*(PRINT)* NAME OF WITNESS

**SIGNED** for and on behalf of the  
**HUNTER WATER CORPORATION**

.....

**Managing Director  
Hunter Water Corporation**

.....

**SIGNATURE OF WITNESS**

*(PRINT)* NAME OF WITNESS

**Memorandum of Understanding Between  
NSW Health and Hunter Water Corporation**

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Appendix F

## Comments from Government Agencies

**Direct Contact Details**

Phone: (02) 4924 6457 Fax: (02) 4924 6215

Email: david.durrheim@hnehealth.nsw.gov.au

22 October 2007

Ms Michelle Larkin  
GHD Audit Coordinator  
GHD Pty Ltd  
10 Bond Street  
SYDNEY NSW 2000

Dear Ms Larkin

**HUNTER WATER CORPORATION OPERATIONAL AUDIT 2006/07**

I refer to your letter dated 18 September 2007, Your Reference 21/16261/134375, inviting NSW Health to provide comments in relation to the auditable obligations Hunter Water Corporation has under the Operating Licence and the Memorandum of Understanding with NSW Health (MOU). Comments in relation to Hunter Water's performance in meeting these obligations are provided under the following headings:

**Compliance with requirements**

NSW Health has an open and cooperative relationship with Hunter Water. NSW Health is of the opinion that Hunter Water has met requirements under the Operating Licence and MOU for the period 1 July 2006 to 30 June 2007.

**Progress to Meeting requirements**

Hunter Water has and continues to progress the application of the framework for the provision of safe drinking water as per the *Australian Drinking Water Guidelines* 2004. Hunter Water actively engages, informs and seeks guidance from NSW Health to progress to meeting requirements.

**Details of any specific incidence of non-compliance**

19<sup>th</sup> & 20<sup>th</sup> December 2006

Failure of the Anna Bay Water Treatment Plant Program Logic Controller (PLC), a computer process management system, resulted in overdosing with fluoride. A maximum of 5.5 milligrams per litre (mg/L) of fluoride was detected in the clear water tank and up to 3.2 mg/L fluoride was detected in samples collected on 20 December 2006 from the distribution system.

The plant ran for approximately 11 hours with a total water throughput of 1.85 Mega litres (ML). The target dosing concentration for fluoride at the Anna Bay Water Treatment Plant is 1.0 mg/L. The overdosing was detected on the morning of the 20<sup>th</sup> December 2007 during routine tests by the Plant Operator.

Appropriate actions were taken to immediately isolate the plant and dilute treated water that had entered to distribution system. Approximately 1.9 ML of un-fluoridated water was produced prior to reinstatement of fluoride dosing. On 21 December 2007, the fluoride concentration in the distribution system was 0.7 mg/L.

The PLC was rectified and modifications made to more appropriately control fluoride dosing.

Hunter New England Area Health Service  
Hunter New England Population Health  
ABN 24 500 842 605

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Wallsend NSW 2287  
Phone (02) 4924 6477 Fax (02) 4924 6490  
Email PHEnquiries@hnehealth.nsw.gov.au  
www.hnehealth.nsw.gov.au/hnep

The *Australian Drinking Water Guidelines* 2004 recommend that based on health considerations, fluoride should not exceed 1.5 mg/L in drinking water. NSW Health is satisfied that this incident was quickly identified and corrected. The higher concentration of fluoride in the drinking water for a short period of time was not a risk to public health and safety.

**Adequacy of actions being taken**

Hunter Water undertakes necessary actions to provide safety of its services. Namely the provision of drinking water, reticulated sewerage and some recycled water. Hunter Water strives to meet the requirements of NSW Health, responds promptly to issues requiring action including appropriate notification to NSW Health and reviews incidents in effort to prevent similar situations from occurring in the future.

**Adequacy of the requirements of the licence and MOU**

Hunter Water's Operating Licence has been substantially expanded with several provisions of the MOU now contained in the Operating Licence. Hunter Water and NSW Health have agreed to remove duplicate provisions from the MOU. NSW Health is of the opinion that the requirements of the new Operating Licence and soon to be updated MOU, are adequate.

Should you require any additional information, please contact Mr Philippe Porigneaux, Environmental Health Officer on (02) 4924 6494.

Yours sincerely

A handwritten signature in purple ink, appearing to read 'David Durrheim', with a large, sweeping flourish extending to the right.

David Durrheim  
**Service Director Health Protection**

cc NSW Water Unit

## Appendix G

# Compliance with the Customer Contract

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

Clause	Requirement	Compliance	Findings
1	Introduction	No requirement	
2	What is a Customer Contract and who is covered by it?	No requirement	This clause provides background information, a definition of the Customer Contract and who is covered.
3	What service does Hunter Water provide?		
3.1	Water supply services	Full compliance	Hunter Water saw a 75% reduction in the number of complaints regarding ' <i>Water continuity</i> ' over 2006/07 (23 compared to 93 complaints in 2005/06). Some 172 rebates for water discontinuity were paid across 7 suburbs.
3.1.1	Supply of drinking water		For more information refer to Section 7 Table 7.1, Clauses 7.3.1.
3.1.2	Drinking water quality	Full compliance	Hunter Water published its annual water quality report for 2006/07 in September 2007. The report shows that Hunter Water has delivered water of a very good quality consistently throughout the period.  Hunter Water saw a 63% reduction in the number of complaints regarding ' <i>Water quality</i> ' over 2006/07 (32 compared to 87 complaints in 2005/06).  For more information refer to Section 6, Clause 6.2.
3.1.3	Drinking water pressure	Full compliance	Hunter Water saw a 36% reduction in the number of complaints regarding ' <i>Water pressure</i> ' over 2006/07 (41 compared to 64 complaints in 2005/06).  For more information refer to Section 7 Table 7.1, Clauses 7.3 (Subclause 2) and 7.5 (Subclause 2).
3.1.4	Supply of recycled water	Full compliance	Hunter Water supplies recycled water to a range of customers. The arrangements for the supply of these waters are detailed within separate agreements with each of the customers supplied. These supply arrangements are consistent with the requirements of the relevant NSW Government agencies.  For more information refer to Section 6, Clause 6.6.

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

Clause	Requirement	Compliance	Findings
	3.1.5 Health or special needs	Insufficient information.	<p>Hunter Water supplies other grades of water for Health or Special Needs to relevant customers and has in place individual supply agreements with each customer that addresses all required terms.</p> <p>For more information refer to Section 6, Clause 6.6.</p>
3.2	Sewerage services		
3.2.1	Supply of sewerage services	Moderate compliance	<p>Hunter Water seeks to fulfil its requirements for sewerage supply through both its capital work program (to make sewerage service available) and then its operational and maintenance program (to ensure service quality and continuity).</p> <p>The ability to assess Hunter Water performance can be gleaned from the System Performance compliance (see Section 7 for detailed information) and the Complaints (see Section 11 for detailed information).</p> <p>Hunter Water had set general targets over 2006/07 for achieving a drop of 25% in operational and 54% in capital complaints.</p> <p>Over 2006/07 complaints relating to the provision of sewerage to outer lying suburbs and the coal fields is captured under a "Miscellaneous" heading which increased by 133%, thus opportunities are available to Hunter Water to enhance satisfaction with its Priority Sewerage Service.</p>
3.2.2	<p>Sewage overflow</p> <p>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.</p>	High compliance	<p>Hunter Water saw a 40% increase in the number of complaints regarding 'Sewer Overflows' over 2006/07 (153 compared to 109 complaints in 2005/06) and, of these, over half related to wet weather overflows. Some 430 sewer rebates were paid across a range of suburbs.</p> <p>Notwithstanding the increase in sewer overflows and the complaints generated, a High compliance was awarded due to the extreme nature of the April and June rainfall events (the latter being well over 1:100 year event).</p> <p>For more information, refer to Section 7, Clause 7.3 (Subclause 3).</p>

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

Clause	Requirement	Compliance	Findings
3.2.3	Blockage of sewer system	No requirement	Information for customer
3.2.4	Trade waste	No requirement	Responsibility of customer.
3.3	Stormwater drainage services	No requirement	Responsibility of customer.
3.4	Factors affecting service		Hunter Water' s compliance with this standard was impacted over the year by two major storm events, vis Anzac Day (25 April, 2007) and Queens Birthday (June, 2007), with the latter being estimated to be well over a 1:100 year event.
3.4.1	Repairs and maintenance	High compliance	A review of data relating to 'Operational Maintenance' complaints, which includes complaints related to repairs and maintenance, indicates these complaints fell by some 40% ( from 381 to 227) compared to last year.
3.4.2	Unplanned interruptions	Full compliance	Both 'Unplanned' and 'Planned' interruptions are reflected in 'Water Continuity' complaints which saw a 75% drop relative to last year (from 75 to 23 complaints).
3.4.3	Planned interruptions	Full compliance	Both 'Unplanned' and 'Planned' interruptions are reflected in 'Water Continuity' complaints which saw a 75% drop relative to last year (from 75 to 23 complaints).
3.4.4.1	Restrictions (Drought)	No requirement	There have been no restrictions due to drought during the audit year. Notwithstanding, Hunter Water has continued to promote water saving initiatives in the community.
3.4.4.2	Restrictions (Major Operational Difficulty)	No requirement	There have been no restrictions due to major operational difficulty during the audit year.
4	What you pay		
4.1	Responsibility to pay account	No requirement	Responsibility of customer.
4.2	Publication of charges	No requirement	Addressed in a previous audit.

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

Clause	Requirement	Compliance	Findings
			For more information refer to Clause 5.3 of the Hunter Water Operational Audit 2005/06.
4.3	Concessions	No requirement	This is an Information clause.
4.4	Your account	Full compliance	There are several subsections to this clause, including when the account will be sent (4.4.1), what information is on the account (4.4.2), how the accounts are to be sent (4.4.3), how payments can be made (4.4.4) and the consequences of overdue account balances (4.4.5). Evidence was provided to demonstrate that the relevant information was included.
4.5-4.7	Undercharging Over charging Account disputes	Full compliance	<p>Hunter Water operates an effective complaints handling process and its systems are designed to comply with the Customer Contract. Hunter Water has monitoring processes in place to measure their effectiveness and regularly reports to senior management and its customers on its performance.</p> <p>Evidence was provided to demonstrate that the relevant information was included.</p> <p>For more information refer to Table 11.2.1(j) Licence Section 12 – Complaint and Dispute Handling.</p>
4.8	How prices are determined	Full compliance	<p>Prices are determined by IPART following 1 July CPI adjustments. Customers are informed about this process.</p> <p>Evidence was provided to demonstrate this action.</p>
4.9	Notification of price variations	Full compliance	<p>Customers are notified through their accounts and advertisements in newspapers.</p> <p>Evidence ('Trim' history) was provided to demonstrate this action.</p>
4.10	Other costs and charges	No requirement	Responsibility of customer.
5	What can you do if you are unable to pay your account		
5.1	Payment difficulties	No requirement	Addressed in a previous audit. For more information, refer to Clause 5.3 of the HWC Operational Audit 2006/07.
5.2	Account relief	No requirement	As above.

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

Clause	Requirement	Compliance	Findings
6	Disconnection or restriction of water and sewerage services	Full compliance	<p>Hunter water has continued to look at ways at reducing the number of customers affected by disconnection and flow restrictions measures for non-payment.</p> <p>These include the development of payment plans, and provision of vouchers, through a link with the local social welfare network.</p> <p>Refer to Section 5, Clause 5.2 (Subclause 2) and Table 5.3.</p>
7	Redress	High compliance	The requirements of this clause are addressed in the Code of Practice for Debt and Disconnection.
8	Responsibilities for maintenance	No requirement	Information Clause
9	Entry onto a customer's property for maintenance		
9.1	Access to Hunter Water's system	No requirement	Primarily information for the customer.
9.2	Identification	Full compliance	The policy on Employee Identification Cards is consistent with the requirements of this clause.
9.3	Notice of access	High compliance	Hunter water issues a <i>Notice of Impending Work</i> to the occupier of a property, prior to entering private property. The notice does not indicate that a minimum of 2 days notice is required in accordance with the Customer Contract (unless agreed otherwise) and a reference on the Notice to the Customer contract is incorrect.
9.4	Impact on customer's property	High compliance	A review of data relating to operational complaints, which would include complaints related to repairs and maintenance, indicates these complaints have dropped substantially over 2006/07.
10	Water meter installation, testing and maintenance	Full compliance	The Customer Services Policies & Procedures are consistent with the requirements of this clause.
11	Who can I speak to if I have any questions or want to make enquiries?	No requirement	Primarily for the information of the customer.

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

Clause	Requirement	Compliance	Findings
12	What can you do if you are unhappy with the service provided by Hunter Water?		
12.1	Customer complaints	Full compliance	The Complaints Management System captures Hunter Water's complaints handling and complaints resolution procedures. For more information, refer to Section 5, Clause 5.2.
12.2	Complaints review	High compliance	Hunter Water has monitoring protocols in place to measure its effectiveness in complaints review and regularly reports to senior management and its customers on its performance. For more information, refer to Section 11, Clause 11.2 of the HWC Operational Audit 2006/07.
12.3	When a dispute is considered resolved	No requirement	Primarily for the information of the customer.
12.4	External dispute resolution	High compliance	Hunter Water advised that there have been no complaints to a Court or Tribunal during this audit period. For more information, refer to Section 11, Clause 11.2 (Subclause 1) of the HWC Operational Audit 2006/07 and Clause 12.3 of the Licence.
13	Consultation, information and privacy		
13.1	Involving customers in service planning	Full compliance	The Forum consists of representatives from all groups specified in Subclause 5.4.6, including consumers and customers. Refer to Clause 5.4.
13.2	Provision of information	Full compliance	The provision and dissemination of information was consistent with the Freedom of Information Act 1998. Three FOI requests were made to Hunter Water in 2006/07.
13.3	Privacy	High compliance	Hunter Water does not have a formal privacy policy however, procedures are in place in both the Contact Centre and the Case Investigations Team to minimise the possibility of

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

Clause	Requirement	Compliance	Findings
			<p>providing inappropriate information:</p> <ul style="list-style-type: none"> <li>▶ Hunter Water confirms the identity of a caller by asking for the person's name and address. Financial information is provided only to the owner or to the owner's representative such as a solicitor or real estate agent;</li> <li>▶ All employees are bound by a Code of Conduct which includes the behavior expected of employees with regard to Customer Accounts; and</li> <li>▶ Access to systems that would include customer information such as CSS (now CIS) and AOMS is limited by security requiring a valid username and password combination to access the system.</li> </ul> <p>Hunter Water implements an extensive customer training program, which included issue on privacy retention.</p>
14	When does my customer contract with Hunter Water terminate?	No requirement	Primarily for the information of the customer.
15	Dictionary and interpretation	No requirement	Primarily for the information of the customer.

## Appendix H

# Compliance with the Code of Practice on Debt and Disconnection

**Table H.1 Compliance with the Code of Practice on Debt and Disconnection**

Clause	Requirement	Compliance	Findings
1.1	Service of Accounts	High compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice in regard to the setting, and approval by IPART of the charges for Hunter Water's services. Evidence was also sighted as to the consistency with respect to: forwarding of accounts; non –metered accounts (vis vacant lands); large water users; changes of ownership; and account recovery processes.
1.2	Accounts Process	Full compliance	Hunter Water's procedures are consistent with the procedures outlined in the Code of Practice. Evidence was sighted to demonstrate this consistency with: first, reminder, and final notices and notices of proposed recovery.
1.3	Notice of Proposed Recovery	Full compliance	Hunter Water's procedures are consistent with the procedures outlined in the Code of Practice. Evidence was sighted to demonstrate the notices of proposed recovery.
1.4	Restriction/Disconnection of Water Supply	Full compliance	Hunter Water's procedures and field practices are consistent with the procedures outlined in the Code of Practice.  No disconnections can occur without the sign-off of the GM.
1.5	Mercantile Agents/Legal Action	No requirement	No debts required mercantile agents or legal action over 2006/07. Hunter Water is currently tendering for these services.
1.6	Recovery Action on Pensioners	Full compliance	Hunter Water's procedures are consistent with the procedures outlined in the Code of Practice. Evidence was sighted to demonstrate the recovery actions.
1.7	Recovery Action on Home Units	Full compliance	Hunter Water's procedures are consistent with the procedures outlined in the Code of Practice. Evidence was sighted to demonstrate the recovery actions
1.8	Recovery Action on Exempt properties	No requirement	No such action was required over 2006/07.  Hunter Water's procedures are consistent with the procedures outlined in the Code of Practice.
1.9	Recovery on Government owned and council properties	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice.  Evidence was sighted to demonstrate the recovery actions, though no differentiation is made to identify such properties.

**Table H.1 Compliance with the Code of Practice on Debt and Disconnection**

Clause	Requirement	Compliance	Findings
1.10	Sub-metering arrangements	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice.
1.11	Payment Arrangements	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. In 2006/07, payment arrangements were set in place for some 11,775 accounts. Authorities to negotiate arrangements have been extended to include limits for the Contact Centre Team Leader, Manager and General Manager, if needed.
1.12	Hold Codes	Full compliance	Hold codes are applied where customers requested further information on a recovery action which was pending. Hunter Water's procedures are consistent with those outlined in the Code of Practice.
1.13	Change of ownership	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. Evidence was cited to demonstrate the consistency.
1.14	Change of postal address	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. Evidence was sighted to demonstrate the consistency. Some 14,072 changes in addresses were made over the year.
1.15	Returned Notices	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. Evidence was sighted to demonstrate the consistency.
1.16	Major customers/Large Customer Accounts	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. Evidence was sighted to demonstrate the consistency.
1.17	Property Lists	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice. Evidence was sighted to demonstrate the consistency.
1.18	Interest	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice.
1.19	Changes to the Supreme Court judgement rate	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice.

**Table H.1 Compliance with the Code of Practice on Debt and Disconnection**

Clause	Requirement	Compliance	Findings
1.20	Recovery fees	Full compliance	Hunter Water's procedures are consistent with those outlined in the Code of Practice and apply a flat fee.
1.21	Tenants and occupiers	No requirement	Information only
1.22	Regulatory references	No requirement	Information only

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