

Review of the Operating Licence for Hunter Water Corporation

Water - Issues Paper
September 2006

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Independent Pricing and Regulatory Tribunal
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1 INTRODUCTION

The Independent Pricing and Regulatory Tribunal of NSW (the Tribunal) is conducting a review of Hunter Water Corporation's (Hunter Water) Operating Licence. The review is being conducted under Part 4B of the *Independent Pricing and Regulatory Tribunal Act 1992*.

Hunter Water's current Operating Licence will expire on 30 June 2007¹. The Tribunal is required to review the Operating Licence and recommend to the Minister for Water Utilities the terms of an amended or new Operating Licence, effective from 1 July 2007².

The Governor has granted the Operating Licence to Hunter Water under the terms and conditions of the *Hunter Water Act 1991* (the Act)³. It enables Hunter Water 'to provide, construct, operate, manage and maintain systems and services' for a range of water, sewerage and drainage activities. The Act also specifies the matters for which the operating licence must contain terms and conditions. The Governor can determine additional terms and conditions to be imposed on Hunter Water as part of the Operating Licence.

The Tribunal is mindful of concerns about the burden of regulation and the cost that regulation imposes on 'doing business' which must ultimately be passed to customers. The Tribunal is also mindful that Hunter Water currently has a monopoly in the supply of certain services within a designated area. The Operating Licence together with other regulatory instruments are intended to protect the community from Hunter Water abusing that position of market power.

The Tribunal is therefore cognisant of the need to balance the benefits and costs of regulation in making recommendations to the Minister on the terms and conditions in Hunter Water's Operating Licence.

The Tribunal is one of a number of agencies that exercise regulatory control over Hunter Water. It is necessary to ensure that any regulation imposed is consistent with the regulatory framework and avoids unnecessary overlap. It is also necessary to ensure that the form of regulation adopted is the most effective and efficient means of achieving the intent of that regulation.

Hunter Water has successfully met the terms and conditions of its operating licence, with the exception of the water continuity standard in 2003/04. However, Hunter Water faces a number of significant challenges.

The competition for water supplies is increasing. Water sharing plans are being developed because of concerns for the environment and sustainability of water sources. The population in the Hunter is growing rapidly. In addition, Hunter Water is being asked to supplement potable water supplies to the Central Coast which faces an immediate water shortage, caused by the drought, and a long term imbalance between demand and supply.

These conditions create the need and opportunity to make better use of existing resources with a greater emphasis on demand management, water recycling and more efficient use of available potable water supplies. The structure of the industry is also expected to change to

¹ Clause 2.2, *Hunter Water Corporation Operating Licence 2002-2007*.

² Clause 2.3, *Hunter Water Corporation Operating Licence 2002-2007*.

³ Section 12, *Hunter Water Act 1991*.

encourage innovation and competition in the supply of services⁴. This will include greater private sector participation. Third party access regimes are being developed and sewer mining encouraged to access wastewater for agricultural, industrial and non-potable domestic uses.

While innovation and greater competition will work to contain costs, prices are expected to come under increasing pressure.

Under such conditions it is necessary to ensure that assets and service standards are maintained. The services provided by Hunter Water are essential for human health and the well being of the community. The Operating Licence is one instrument that can be used in support of service standards and the protection of vulnerable customers, particularly where customers do not have a choice of supplier.

1.1 Tribunal's considerations

Hunter Water's existing Operating Licence requires that, in reviewing the licence, the Tribunal should:

- Determine whether the Licence is fulfilling its objectives.
- Review some specific matters (see Box 1.1).
- Determine the terms of any renewal of the Licence.⁵

Box 1.1 Matters required to be reviewed

The Operating Licence requires the following matters to be reviewed as part of this Review:

1. The effectiveness of the Consultative Forum and compliance with the Consultative Forum Charter (Clause 5.4.11).
2. The outcomes achieved by the Integrated Water Resources Plan (Clause 8.3.8).
3. Applying the Integrated Water Resources Plan and the matters in clause 8.3 of the Licence, Hunter Water must outline targets, standards, indicators or other proposals for consideration as part of the Licence review (Clause 8.3.18).
4. The environmental and ESD indicators in clause 9.2.6 (Clause 9.2.9).

1.2 Review process

As part of the review process, the Tribunal will consult with key stakeholders, including Hunter Water and environmental, community and water user advocacy organisations. It invites all interested parties, including members of the public, to make submissions to the review on the issues highlighted in this paper, as well as any other matter relating to Hunter Water's Operating Licence.

⁴ NSW Government, *Consultation Paper: Creating a dynamic and competitive metropolitan water industry*, May 2006.

⁵ Clause 2.3, *Hunter Water Corporation Operating Licence 2002 - 2007*.

The Tribunal also plans to hold a public workshop to provide further opportunities for stakeholders to present their views. It will publicise arrangements for this workshop closer to the date.

The timetable for the review is provided below. Details on how to make a submission can be found at the front of this paper.

Timetable for review

Action	Timeframe
Release issues paper	11 September 2006
Receive submission from Hunter Water Corporation	13 October 2006
Receive public submissions	3 November 2006
Hold public workshop (in Newcastle)	November 2006
Present final report to Minister for Water Utilities	April 2007

2 ISSUES

The Tribunal welcomes comments on the following issues raised in this paper as well as any other matters relevant to the review that are important to stakeholders. In making submissions, stakeholders should have regard to the costs and benefits of any proposed change to the Operating Licence.

1. Does the operating licence reflect regulatory best practice? (*Chapter 3*)
2. Matters that are required to be investigated as part of this review by the current operating licence⁶:
 - a. Is the operating licence fulfilling its objectives? (*Chapter 3*)
 - b. How effective is the Consultative Forum and is its charter being complied with? (*Chapter 10*)⁷
 - c. How effective is the Integrated Water Resource Management Plan (IWRMP) and what outcomes have been achieved? (*Chapter 9*)
 - d. With respect to the IWRMP, what targets, standards, indicators or other proposals has Hunter Water formulated for consideration as part of this review? (*Chapter 9*)
 - e. How appropriate are the environmental and ESD indicators outlined in clause 9.2.6 of the operating licence? (*Chapter 7*)
3. Matters required by the Act to be included in the Operating Licence⁸.
 - a. What quality and performance standards should be specified in the licence in respect of:
 - i. water quality (*Chapter 5*)
 - ii. service interruptions (*Chapter 8*)
 - iii. price levels⁹
 - iv. other matters, (*Various chapters*)
 - b. Under what terms and conditions should Hunter Water be required to:
 - i. provide, construct, operate and maintain efficient, co-ordinated and commercially viable systems and services for supplying water, providing sewerage services and disposing of wastewater (*Chapters 5,6 & 8*)
 - ii. provide, operate, manage and maintain a drainage service? (*Chapter 8*)
 - c. What functions should be conferred or imposed on the Tribunal by the operating licence in connection with operational audits of the Corporation? (*Chapter 11*)¹⁰
 - d. What terms and conditions should be included in the operating licence on how the Tribunal prepares the operational audit? (*Chapter 11*)¹¹

⁶ Clause 2.3, *Hunter Water Corporation Operating Licence 2002-2007*.

⁷ Section 13 (2), *Hunter Water Act 1991*.

⁸ Section 13 (1), *Hunter Water Act 1991*.

⁹ Hunter Water's current licence requires Hunter Water to set prices subject to the terms and conditions of the Licence, the Act and prices as determined by the Tribunal. No quality or performance standards are currently specified in the licence in respect of pricing.

¹⁰ Section 18B, *Hunter Water Act 1991*.

¹¹ Section 18C, *Hunter Water Act 1991*.

4. What terms and conditions are required in the operating licence to protect customer standards and consumer rights? (*Chapter 10*).

3 OVERVIEW OF HUNTER WATER AND THE ROLE OF THE OPERATING LICENCE

Hunter Water is a statutory State Owned Corporation. It has two shareholding ministers - the NSW Treasurer and one other Minister of the Crown (on behalf of the State). Hunter Water also has a portfolio Minister who has powers to direct Hunter Water in certain matters of public interest. The portfolio Minister is the Minister for Water Utilities.

Overall control of the Corporation is vested in a Board of Directors appointed by the shareholders. The activities of Hunter Water are authorised by the *Hunter Water Act 1991* (the Act) and regulated by the Operating Licence. Hunter Water's functions and the role of the Operating Licence are discussed further below. Hunter Water is also subject to a range of other regulatory instruments which are discussed in Chapter 4.

3.1 Hunter Water's functions

Hunter Water has the functions conferred on it by the Act or any other law.¹² Under the Act, the principal functions of Hunter Water are "to provide, construct, operate, manage and maintain systems and services for:

- (a) supplying water,
- (b) providing sewerage and drainage services, and
- (c) disposing of waste water",

subject to the terms of the Operating Licence.¹³

3.2 The Operating Licence

The Act specifies that Hunter Water's Operating Licence must include terms and conditions which require Hunter Water:

- 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
- to provide, operate, manage and maintain a drainage service
- to ensure that Hunter Water's 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 of NSW
- to maintain procedures under which Hunter Water is to consult with its customers at regular intervals in relation to the provision of these systems and services.¹⁴

The current Operating Licence came into effect on 1 July 2002 and will expire on 30 June 2007.

¹² Section 4A, *Hunter Water Act 1991*.

¹³ Section 12, *Hunter Water Act 1991*.

¹⁴ Section 13, *Hunter Water Act 1991*.

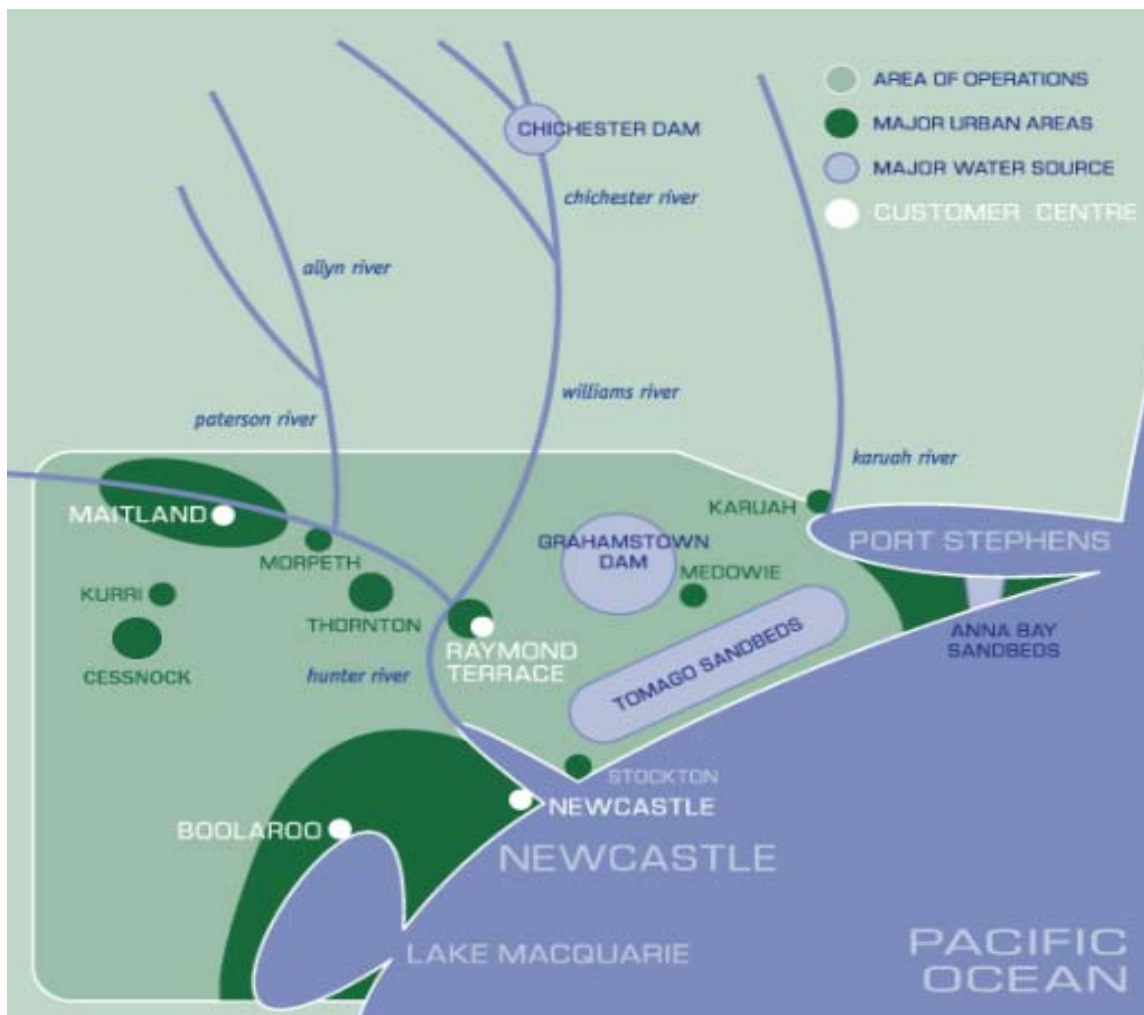
The Tribunal is responsible for making recommendations to grant, amend or cancel Hunter Water’s Operating Licence or to impose, amend or cancel conditions in relation to the Operating Licence. The Tribunal also monitors and reports on Hunter Water’s compliance with the Operating Licence, through annual operational audits of Hunter Water. In the event of a contravention of the Licence, the Tribunal can determine to impose monetary penalties or require other action to be taken in relation to the contravention under section 17 of the Act.

At the conclusion of this review, the Tribunal will make a recommendation to the Minister on the terms of Hunter Water’s new Operating Licence.

3.3 Area of operations

Hunter Water’s Operating Licence applies in an “area of operations”.¹⁵ Figure 1 illustrates Hunter Water’s area of operations.

Figure 1 Hunter Water’s Areas of Operation



¹⁵ This area is referenced in section 16 of the *Hunter Water Act 1991* and defined in the *Hunter Water Corporation Operating Licence 2002-2007*.

3.4 Role of the Operating Licence

The Operating Licence is one of the key elements of the regulatory framework which sets the direction and performance criteria for Hunter Water, and monitors its performance against these criteria.

Objectives of the licence

Clause 2.1.1 of the Operating Licence sets out the objectives of the licence. The overriding objective is 'to enable and require Hunter Water to lawfully provide the Services specified in the Act within its area of operations. Consistent with this objective, the licence requires Hunter Water to:

- meet the objectives and other requirements imposed on it in the Act
- comply with quality and performance standards in the licence
- recognise the rights given to Customers and Consumers by the Act and the licence
- be subject to annual audits of compliance with this licence.'

Regulatory coordination

The Tribunal views the Operating Licence as the overarching regulatory instrument for Hunter Water. Whilst the Tribunal strongly supports the need to avoid unnecessary duplication of regulation, it recognises that businesses like Hunter Water can have profound effects on their customers, public health and the environment. A proper assessment of performance is impossible without an appropriate consideration of health, environmental and customer issues. However, the Tribunal strongly believes that the Operating Licence should complement, and be consistent with, other regulatory requirements imposed on Hunter Water. Importantly, the Operating Licence should not duplicate other regulatory instruments. The Operating Licence therefore needs to reflect the broader regulatory framework applying to Hunter Water (which is discussed further in Chapter 4).

Public reporting

An important strength of the Operating Licence is that performance is required to be publicly reported (through the annual audit). Stakeholders and the public also have the opportunity to participate in the Tribunal's public review processes, by making submissions and participating in the public workshop. This differs from many other regulatory instruments which are often negotiated largely on a bilateral basis between the agency and regulator and may not explicitly provide for public reporting of the outcomes delivered. The Tribunal therefore sees the Operating Licence as an important instrument of transparency and accountability for Hunter Water.

Regulatory best practice

The Licence should also represent regulatory best practice. This means that it should achieve the desired outcomes without imposing unnecessary compliance and administration costs. This is discussed further below.

3.5 Regulatory best practice

An important objective of the Tribunal's review is to determine the terms of any renewal of the Licence in accordance with 'best practice regulation'. The Tribunal recently articulated the elements of best practice regulation in a report to the Government.¹⁶ Applying these elements in the context of this review, the Tribunal believes the terms of the Operating Licence must:

- **Be effective and justified.** The Licence should focus on outcomes that are materially significant. It should be directed at regulating issues that cannot be more efficiently or effectively addressed by the market, by individuals acting without government involvement, or other available alternatives.
- **Provide a net benefit to society.** Licence requirements should provide a net benefit to society. They should not impose unnecessary administrative or compliance costs on Hunter Water or the Tribunal and should avoid perverse outcomes.
- **Not be unduly prescriptive.** Licence obligations can prescribe particular actions or they can require specified outcomes. While prescribing actions can provide certainty in compliance, the Tribunal believes that, where possible, the licence should stipulate performance goals or outcomes that encourage cost effective compliance.
- **Minimise regulatory overlap and avoid regulatory inconsistency.** As much as possible, the licence should avoid inconsistency with or duplication of other regulatory requirements, particularly in relation to the collection and reporting of environmental and other performance indicators. Inconsistencies or overlap can waste resources, create confusion and reduce the regulated entity's level of accountability.
- **Be enforceable through an audit process.** Audits are the primary means of assessing compliance with the licence, so performance measures or requirements in the licence should be able to be readily verified – they should be measurable and auditable.
- **Include only matters that are within the control of Hunter Water.** In order to ensure accountability, licence requirements must be within the power of Hunter Water to achieve.
- **Express Hunter Water's obligations clearly and concisely.** Licence obligations must be simply and unambiguously expressed to ensure that Hunter Water, the Tribunal, and the community understand clearly what Hunter Water must do to comply with the Licence.

3.6 Regulatory best practice in the Operating Licence

In its draft report on regulation¹⁷, the Tribunal set out its support for greater co-ordination of regulatory effort, streamlining of regulatory processes (including the use of common definitions and reporting frequencies across regulatory agencies) and the identification and removal of unnecessary reporting requirements. In particular, the Tribunal suggested that existing information requested by regulatory agencies should be investigated to determine whether it is necessary, meaningful and justifiable on the basis of overall benefit to the community.

¹⁶ IPART, *Investigation into the burden of regulation in NSW and improving regulatory efficiency – Draft Report*, July 2006, p 38.

¹⁷ IPART, *Investigation into the burden of regulation in NSW and improving regulatory efficiency – Draft Report*, July 2006, p 25.

The Tribunal also expressed the view that new regulatory requirements for water utilities (such as performance indicators and standards, mandatory guidelines, codes of practice and other reporting requirements) should be subject to proportionate cost-benefit analysis¹⁸, as well as stakeholder consultation. The Tribunal believes that the efficiency of current regulatory arrangements for water should be reviewed and that opportunities for greater integration and coordination amongst regulators to achieve social and environmental objectives should be investigated.

To this end, the Tribunal has identified the following opportunities for reform of the Hunter Water Operating Licence:

- Replace the requirement to monitor drinking water for the parameters in Schedule 3 with a targeted list of relevant water parameters agreed with NSW Health.
- Remove requirements for the negotiation of Memoranda of Understanding with the Department of Environment and Conservation (DEC) and the Department of Natural Resources (DNR).
- Reduce duplication and improve transparency by requiring results to be published of monitoring and reporting undertaken in compliance with the DNR Water Management and Water Access Licences.
- Remove obligations concerning environmental water quality and water supplied for other purposes to the extent that they are either inconsistent with or overlap, the activities of other regulators.
- Require the Catchment Management Report to be more “outcome focussed” by comparing planned activities and expenditure with actual outcomes.
- Rationalise the number and definitions of indicators, especially where these provide consistency with those being collected as part of the National Water Initiative.
- Align the introduction of system performance standards with the price setting process so that costs of the revised standards can be adequately taken into account.
- Restrict the reporting of external disputes and their resolution to information available from EWON.
- Introduce a risk-based audit regime.

The Tribunal notes that none of these proposed actions should impact on water quality.

Is the operating licence fulfilling its objectives?

Does the operating licence reflect regulatory best practice?

¹⁸ Through proportionate cost-benefit analysis, the effort applied to the cost-benefit analysis should reflect the magnitude of the likely impact of the matter being considered.

4 REGULATORY FRAMEWORK

4.1 Current regulatory framework

Hunter Water operates within a complex regulatory framework. As discussed in Chapter 3, the Operating Licence administered by the Tribunal is a key component of this framework. This section discusses other components of the regulatory framework under which Hunter Water operates.

Hunter Water is subject to a range of other regulatory instruments administered by other regulators, including:

- A *Statement of Corporate Intent*, negotiated between the shareholders and management of Hunter Water, setting financial performance targets.
- A *Water Management Licence* under the *Water Act 1912* and *Access Licences and Combined Works and Use Approvals* under the *Water Management Act 2000*, granted by the Department of Natural Resources (DNR), regulate the taking and use of water resources. Water sharing plans set entitlements to water.
- *Environment Protection Licences* under the *Protection of the Environment Operations Act 1997*, granted by the Department of Environment and Conservation (DEC), regulate sewage treatment plants and other discharges into the environment.

Hunter Water is also subject to regulation by other agencies or organisations, including:

- *NSW Health*, which monitors and regulates the safety and quality of drinking water under the *Public Health Act 1991* and the terms of the Operating Licence.
- *NSW Dam Safety Committee (DSC)* which ensures the safety of dams in NSW.

Hunter Water also works closely with other government agencies or organisations including *Catchment Management Authorities (CMAs)*, established under the *Catchment Management Authorities Act 2003* to manage the natural resources in catchment areas through investment strategies, funding, incentive programs and education and training.

There are also intergovernmental agreements such as the *National Water Initiative (NWI Agreement)*¹⁹ that potentially impose further reporting requirements on water utilities such as Hunter Water.

These components of the regulatory framework are discussed further below. As discussed in Chapter 3, it is important for the Operating Licence to impose requirements which are not inconsistent with and do not duplicate other components of the framework regulating Hunter Water's operations.

¹⁹ *Intergovernmental Agreement on a National Water Initiative*, June 2004. The Agreement is between the Commonwealth, New South Wales, Victoria, Queensland, South Australia, The Australian Capital Territory and the Northern Territory. Tasmania has since signed the Agreement in June 2005 and Western Australia in April 2006.

4.2 Statement of corporate intent

As a State Owned Corporation, Hunter Water is required to negotiate a *Statement of Corporate Intent* (SCI) with its shareholder Ministers. The SCI ensures management's accountability for corporate performance and clarifies the shareholders' expectations of financial performance.

4.3 Water plans and licences

The Department of Natural Resources (DNR) controls Hunter Water's access and use of water through Water Sharing Plans, a Water Management Licence (WML) under the *Water Act 1912* for Williams River activities and groundwater monitoring bores, and Access Licences and Combined Works and Use Approvals under the *Water Management Act 2000* for the Tomago and Tomaree aquifers.

The Water Sharing Plans set Hunter Water's various water entitlements. The WML authorises Hunter Water to take and use water, monitor groundwater bores, and imposes environmental flow requirements. The WML also requires Hunter Water to provide data, reports and information.²⁰ The Access Licences entitle Hunter Water to a share of available water in the aquifers, and the Combined Works and Use Approvals enable Hunter Water to then take and use that water.

DNR is responsible for managing the catchment Special Areas from which Hunter Water draws raw water to supply customers.²¹ DNR administers the Hunter Water (Special Areas) Regulation 2003, which regulates land use and development within the catchment areas.

4.4 Environment Protection Licences

The Department of Environment and Conservation (DEC) is responsible for monitoring and regulating the discharges from Hunter Water's sewerage system and the quality of the receiving waters. The DEC issues Environment Protection Licences under the *Protection of the Environment Operations Act 1997* for Hunter Water's wastewater transportation and treatment systems. The licences stipulate both quality and quantity conditions for discharge from each wastewater treatment works and specify operational controls and reporting for the pipe network and pump stations.

4.5 NSW Health

NSW Health is responsible for regulating and monitoring the safety and quality of Hunter Water's drinking water. Hunter Water is required to provide NSW Health with a comprehensive water quality management plan outlining current and long term strategies for water supply, catchment management and public health aspects of wastewater disposal and reuse. Hunter Water is also required to provide an Annual Water Quality Report, monthly monitoring results and event based results.

²⁰ The Water Management Licence under the *Water Act 1912* was issued to Hunter Water on 26 December 1998 and expires on 25 December 2023. The Licence was reviewed in December 2003 and will be reviewed again by 25 December 2008 (and at five-yearly intervals thereafter).

²¹ Section 52, *Hunter Water Act 1991*.

The Operating Licence requires Hunter Water to maintain a Memorandum of Understanding (MoU) with NSW Health which recognises NSW Health as the drinking water quality regulator and facilitates effective interaction between the two organisations.

4.6 The NSW Dams Safety Committee (DSC)

The DSC is a statutory body set up under the *Dams Safety Act 1978*. The regulatory requirements imposed by the Committee are a major driver of dam safety related maintenance. The Committee's monitors specified dams; investigates dam-related activity; and formulates measures to ensure dam safety. The Committee has extensive powers to undertake tests on dams, to direct dam owners to carry out remedial activities, and to take control of dams in an emergency. The Committee audits the effectiveness of dam safety measures by requiring dam owners to submit five-yearly Surveillance Reports.

4.7 Catchment Management Authorities (CMAs)

The *Catchment Management Authorities Act 2003* established CMAs to devolve operational, investment and decision-making natural resource functions to the catchment level. The purpose of the CMAs is to implement Catchment Action Plans that reflect natural resource management principles and engage regional communities in key natural resource management issues. CMAs are the primary vehicle for the allocation of Federal and NSW Government funds for natural resource improvement programs.²²

The Hunter-Central Rivers CMA is responsible for such programs in Hunter Water's area of operations. Hunter Water is required to work closely with the Hunter-Central Rivers CMA to ensure the catchment is managed appropriately – this is discussed further in Section 5.

4.8 National Water Initiative

On 25 June 2004, NSW and most other States and Territories, signed the National Water Initiative (NWI) Agreement with the Commonwealth Government.

This agreement requires the establishment of a nationally consistent framework for benchmarking price and service quality information.²³ The Tribunal is co-ordinating the NSW component of this benchmarking project for major urban water utilities, including Hunter Water. The benchmarking project involves the collection and audit of various performance, customer service and financial data, and forwarding the combined results to the National Water Commission.

The Tribunal intends to incorporate requirements concerning the collection and audit of NWI data into the Hunter Water Operating Licence in order to avoid duplication and ensure that the cumulative impact of the various information requirements imposed on Hunter Water are reasonable, efficient and effective.

²² Hunter-Central Rivers CMA, *2004-05 Annual Report*, p 6.

²³ Clauses 75-76, *Intergovernmental Agreement on a National Water Initiative*, June 2004.

5 WATER QUALITY

5.1 Objectives of Water Quality requirements

The Act requires that the Operating Licence include obligations to “ensure that Hunter Water’s systems and services meet the quality and performance standards specified in the licence in relation to water quality”²⁴.

The importance of the specification of quality and performance standards for drinking water is a matter of public health. The cost to the community of unreliable drinking water suggests that stringent drinking water standards are both appropriate and justified. The importance of such standards for bulk water is related to the need to ensure that the drinking water supply is not compromised by factors that are not able to be rectified through normal water treatment, such as *Cryptosporidium* and *Giardia*. This discussion needs to take account of the fact that Hunter Water has a limited role in the management of its drinking water catchments. With regard to other grades of water, the specification of quality and performance standards needs to be considered in view of the fact that these water supplies are typically provided for a variety of uses under specific supply contracts.

NSW Health determines drinking water quality standards, and supervises the on-going monitoring of Hunter Water’s compliance with these standards. To avoid regulatory duplication while providing for audit and public reporting of compliance through the Tribunal’s annual audit, the Operating Licence drinking water quality obligations have traditionally transcribed the standards determined by NSW Health.

5.2 Drinking water quality

The water quality standards in the current licence are based on the 1996 Australian Drinking Water Guidelines (the 1996 Guidelines). These guidelines have recently been replaced by the 2004 Australian Drinking Water Guidelines (the 2004 Guidelines). The NSW Cabinet has endorsed the 2004 Guidelines as best practice water quality protection. At the request of NSW Health, Hunter Water has been reporting against the 2004 Guidelines since 1 July 2005.

The Tribunal believes it appropriate for the Operating Licence to recognise the 2004 Guidelines. The Tribunal will seek and be guided by input from NSW Health on the most appropriate way that the new 2004 Guidelines may be incorporated into the licence. Other drinking water quality obligations in the existing licence serve to facilitate implementation of the Guidelines, consistent with similar requirements in Sydney Water’s Operating Licence.

5.3 Bulk water quality

Hunter Water’s current Operating Licence includes obligations to report the results of monitoring against bulk water quality parameters specified in clause 6.2.1²⁵ and Schedule 3, and five year trends in the Williams River against specific water quality parameters.²⁶

²⁴ Section 13 (1) (c), *Hunter Water Act 1991*.

²⁵ Clause 6.2.1 of the existing Operating Licence refers to “health guideline values” and “aesthetic guideline values”.

²⁶ Clause 10, *Hunter Water Corporation Operating Licence 2002-2007*.

In contrast, the Sydney Catchment Authority's (SCA) Operating Licence now includes requirements designed to fit more closely with the 2004 Drinking Water Guidelines. The SCA is required to meet guideline values of certain "health related water quality parameters" which are determined in consultation with NSW Health. These replace the previous requirement to comply with a list of substances set out in a Schedule to the licence. These lists were similar to the lists in the existing Hunter Water licence.

For the SCA, the Tribunal felt that the new approach was desirable for two reasons. It provides the capacity to cease monitoring for any substance that was no longer of concern and the flexibility to expand the list of monitoring to include substances that have recently become of concern. A similar approach may be suitable for the Hunter Water Operating Licence as an alternative to the list of water quality parameters in Schedule 3.

Routine water quality monitoring is an important water quality protection mechanism. The existing Operating Licence includes routine water quality monitoring requirements in clauses 6.3 and 10. To avoid duplication, the licence includes a requirement to report the extensive monitoring results required under Hunter Water's Water Management Licence together with the results of five year water quality trends in the Williams River.²⁷

The 2004/2005 Audit Report noted that there was insufficient commentary on significant water quality trends and included recommendations that commentary or explanation should accompany all significant water quality trends and a water sampling program should be undertaken to investigate the impacts of rain events. The requirement to develop a targeted, investigative, event-based monitoring program in conjunction with NSW Health and DNR was added to the SCA's Operating Licence to gain a better insight into the interaction between water quality and specific events, such as rainfall. Such a program fits well with the risk-based philosophy of the 2004 Guidelines.

The quality of water released into rivers and streams is an important environmental issue. The risk-based approach to environmental water quality of the 2004 Guidelines was adopted in the SCA's operating licence. This involves analysis of the risks to water quality in a catchment and identifying catchment management activities that can be expected to lead to water quality of an acceptable standard.

Other agencies share responsibility for the management of Hunter Water's catchments. The DNR has control of the special areas under the Hunter Water (Special Areas) Regulation. The Hunter-Central Rivers CMA also has a major role in coordinating catchment management activities in other areas of the catchments.

For the Hunter Water Operating Licence to include environmental water quality obligations it would need to place requirements on Hunter Water to negotiate a co-ordinated approach with the other agencies involved in catchment management.

As Hunter Water is not the only agency responsible for environmental water quality, the Operating Licence could only at best, require a "best endeavours" approach by Hunter Water.

²⁷ Clauses 10.1.1(c) and (e), *Hunter Water Corporation Operating Licence 2002-2007*.

5.4 Water supplied for purposes other than water treatment

The supply of water for purposes other than water treatment covers the supply of recycled water and raw (bulk) water.

Recycled water

The provisions for recycled water in the current Hunter Water Licence are:

- 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.

These requirements are similar to requirements in the Sydney Water operating licence.

The guidelines detailed in the licence are quite specific. There are no general comprehensive guidelines for recycled water quality that cover the numerous uses to which recycled water is applied. The quality of recycled water provided by Hunter Water to a specific customer is typically covered by a supply contract.

Raw Water

Like the SCA, Hunter Water supplies raw water directly to a few customers upstream of water treatment plants, mostly farms. This water supply is subject to a "non-standard" contract which expressly provides no guarantee of water quality or continuity of supply.

Requirements covering this supply are covered in the Operating Licence as follows:

- 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.

In its recent review of the SCA operating licence, the Tribunal recommended to the Government that clauses similar to the above be deleted from the licence. This recommendation reflected the fact that the supply of raw water by the SCA was governed by specific contracts that set out the quality and availability of the raw water provided and it was felt that it was not necessary for the operating licence to regulate this activity as well.

What quality and performance standards should be specified in the licence in respect of water quality?

6 CATCHMENT MANAGEMENT AND PROTECTION

6.1 Management of Hunter Water's catchments

Hunter Water draws its surface waters from the catchments of the Williams and Chichester Rivers. It has traditionally taken an active role in the management of its catchments, particularly the Williams catchment. Hunter Water has undertaken water quality monitoring, research, site improvement works, together with the development of plans and strategies. Hunter Water has also worked actively with regional Landcare, the Hunter-Central Rivers CMA, other Government agencies and community groups to protect the source catchments and their environments. This ensures that good quality water remains available to Hunter Water and that the cost of treating this water is minimised.²⁸

Protection of the catchments is primarily achieved through land use management, and in particular management of the Special Areas, where access is limited to protect drinking water quality. DNR has control of the Special Areas,²⁹ which include areas that affect all Hunter Water's water sources ie, the Chichester, Grahamstown and Williams River catchment areas as well as the Nelson Bay, North Stockton and Tomago Sandbeds.³⁰

Hunter Water must be notified of any proposed developments that may impact on Hunter Water's operations or water quality in the catchments. Consent authorities, usually Councils or the Department of Planning, must take into account any advice provided by Hunter Water in determining whether to grant consent or attach conditions to any such consent.³¹ Hunter Water places land management conditions on lessees who lease land from Hunter Water for farming purposes and creates buffer zones where no activities are permitted.³² Hunter Water also undertakes various activities on land that it owns or manages, such as weed and fire management.

6.2 Objectives of catchment management

The ecological health of the catchment areas has a direct bearing on the quality of water harvested by Hunter Water and supplied to customers.

While the Act requires that the Operating Licence include obligations concerning water quality, past Operating Licence have recognised the limited role Hunter Water has in respect of catchment management and limited obligations to producing plans and reporting various data. In order to avoid duplication while maintaining transparency, the current Operating Licence requires Hunter Water to report activities done to comply with other regulatory instruments, wherever this is practical. This has the advantage that no compliance costs attach to such obligations.

²⁸ Hunter Water Corporation, *Catchment Management Performance 2004-05 – Report to IPART*, August 2005, p 3.

²⁹ Section 52, *Hunter Water Act 1991*.

³⁰ Hunter Water Corporation, *Catchment Management Performance 2004-05 – Report to IPART*, August 2005, p 4.

³¹ Section 51, *Hunter Water Act 1991*.

³² Hunter Water Corporation, *Catchment Management Performance 2004-05 – Report to IPART*, August 2005, p 3.

6.3 Current catchment management requirements

Under the current Operating Licence, Hunter Water is required to produce a five-year Environment Management Plan, setting out improvement strategies for catchments, storages and sewerage, and to report environmental impacts such as energy management and waste minimisation. Data on performance indicators must be compiled and reported. This is discussed further in Chapter 8.

Section 10.1 of the licence requires Hunter Water to publish an annual Catchment Report which must include:

- a) monitoring results against the Bulk water quality parameters specified in Schedule 3 (pesticides, chemicals and radiological parameters)
- b) details of activities conducted by Hunter Water under the Special Areas Regulation, 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) details of other catchment or landcare activities conducted by or on behalf of Hunter Water, and
- e) five year water quality trends in the Williams River against a range of water quality parameters.

The reporting of monitoring results against the Bulk water quality parameters and of the five year water quality trends in the Williams River were discussed earlier in Chapter 5. The Tribunal believes these requirements more appropriately belong in the drinking water quality provisions of the Licence.

The Tribunal understands that activities resulting from the Williams River Catchment Regional Environment Plan and the Regional Planning Strategy have now been incorporated into the work of the Hunter-Central Rivers CMA. The Seaham Weir Operations Plan has now been incorporated into Hunter Water's WML. Any requirement to report on catchment management activities should therefore reflect these changes.

The Tribunal believes requiring Hunter Water to publicly report on its performance against the WML and the Dams Safety Act provides transparency to these activities and thereby enhances Hunter Water's accountability in these areas. However, if such requirements are retained in the new Operating Licence, the Tribunal believes they would be more appropriately located within the drinking water quality and the system performance provisions of the Licence respectively, rather than as part of the annual Catchment Report.

The requirement for Hunter Water to report on its "other catchment or landcare activities" provides important transparency on Hunter Water's activities and achievements in this area.

The Tribunal recently amended similar provisions in the Operating Licence of the SCA to be more “outcome-focussed”. Under the SCA’s Operating Licence, information provided in the Catchment Management Report must:

- (a) for each catchment management and protection activity or program, be in a format and content to be agreed between the SCA and IPART, and include the following:
 - (i) the planned and actual catchment management and protection activities;
 - (ii) the planned and actual expenditure for each of these activities; and
 - (iii) the planned and actual outcomes for each of these activities;
- (b) identify program activities which responded to the recommendations or findings of the Annual Audit, Catchment Audit, or the SCA’s research or monitoring programs;
- (c) explain any annual changes in catchment management and protection activities or programs and expenditure; and
- (d) include the SCA’s compliance with any Plan of Management.

In respect of catchment management, under what terms and conditions should Hunter Water be required to provide, construct, operate and maintain efficient, co-ordinated and commercially viable systems and services for supplying water?

7 PROTECTION OF THE ENVIRONMENT

The provision of water, sewerage and drainage services has fundamental impacts on the environment. For example, creating storages and extracting water from rivers reduces the amount of water flowing in river systems. This can reduce water quality and the ability of natural flows to support ecological processes. At the other end of the cycle, disposing of treated sewage and stormwater waste in the ocean and other waterways can reduce water quality and disturb aquatic ecosystems, and affect public health and amenity by contaminating swimming areas.

Given the significance of these issues, it is not surprising that the environmental performance of water utilities is subject to specific regulation. As discussed in Chapter 4, Hunter Water is regulated by the DEC in relation to environmental impacts arising from the effluent discharged from its treatment plants and sewerage systems, and by DNR in relation to environmental impact associated with the extraction of bulk water for supply purposes.

The Tribunal recognises the primary roles of the DEC and DNR in determining environmental priorities and standards. However, the Tribunal cannot accurately report to government on Hunter Water's overall performance without considering its impact on the environment. The role taken by the Operating Licence has been to require public reporting of Hunter Water's environmental performance against the standards set by regulators such as DEC and DNR. This transparency and accountability is important, particularly given the public interest in water conservation and clean beaches and rivers – a fact reflected in a recent survey which found that 59 per cent of those interviewed see Hunter Water's role in environmental management as very important.³³

7.1 Existing licence conditions

Hunter Water's current Operating Licence requires the Corporation to:

- prepare five-year environmental management plans, which incorporate environmental indicators and targets, and are reflected in the Hunter Water's business plans (see **section 7.2**)
- measure and report against environmental and Ecologically Sustainable Development (ESD) indicators which reflect the Corporation's impact on the environment (see **section 7.3**)
- work towards improved energy efficiency and reduced greenhouse gas emissions through participation in the NSW Government's energy smart business program (see **section 7.4**).

7.2 Hunter Water's environment management plan

Section 9 of the Operating Licence requires Hunter Water to develop and report against five-year environmental management plans. The aim of the plan is to demonstrate Hunter Water's commitment to conduct its operations in an environmentally sustainable fashion and to implement strategies and show progress towards this ultimate objective.

³³ Ipsos, *2005 Domestic Customer Perception Survey*, 23 November 2005, p 34.

Hunter Water's current environmental management plan sets out a number of environmental objectives which are supported by actions, targets and performance indicators which are used to gauge progress against the overall objective. The Plan incorporates many of Hunter Water's regulatory requirements arising from the Operating Licence and other requirements imposed by DEC and DNR. A number of the environmental objectives and targets contained in the plan have also been set internally by Hunter Water itself. Some of these internal targets may be in need of updating.

The Tribunal notes that the environmental management plan is just one component of Hunter Water's environmental management system (EMS). The EMS is designed to ensure that Hunter Water meets all of its environmental requirements and has strategies in place to effectively manage environmental risk. One option, which now forms part of the operating licence for Sydney Water, would be for Hunter Water to continue to prepare environmental management plans, but also to certify its EMS to the relevant Australian standard. This would help ensure that Hunter Water's primary tool in meeting its environmental obligations reflected best practice in Australia.

7.3 Current environmental and ESD indicators

Hunter Water is currently required to report annually against a suite of environmental and ESD indicators. The Corporation does this by publishing performance against the indicators in its annual *Environmental and ESD Indicators Report* which is available for viewing on Hunter Water's website.³⁴ The current suite of environmental and ESD indicators is listed at Appendix A.

Hunter Water currently reports on around 41 separate environmental and ESD indicators. In some cases, the indicators used are essentially descriptive in nature, rather than providing quantitative figures or numbers.³⁵ As a result, it may be difficult to measure progress or specify trends in relation to these indicators as required by clause 9.2.8 of the current Operating Licence.

As part of the recent operating licence review for Sydney Water, the Tribunal, in consultation with Sydney Water, developed a comprehensive suite of 21 environmental indicators covering all aspects of the Sydney Water's environmental performance. These environmental indicators are listed in Appendix B. A possible option is to require Hunter Water to report against all or part of these indicators. This approach may have the advantage of allowing Hunter Water's environmental performance to be benchmarked against another major water utility, providing an incentive for both agencies to improve performance where possible.

However, a potential downside may be that some of the environmental indicators used for Sydney Water may not be realistic for Hunter Water due to system and scale differences between the corporations.

³⁴ See www.hunterwater.com.au/envIndicators.asp

³⁵ For instance see Hunter Water's indicators for catchment management, environmental education and the stormwater environmental improvement program in *Hunter Water Corporation, Environmental and ESD Indicators Report 2004-05*, pp 3, 10, 11.

7.4 Energy management

Hunter Water is a significant consumer of energy, using in 2004/05 some 67,306,563 kilowatt hours of electricity³⁶ – equivalent to the annual electricity consumption of around 7,500 residential households.³⁷

Energy use represents a significant cost for Hunter Water, with purchases of electricity, petrol, automotive diesel and natural gas amounting to an estimated \$5.5 million in 2004/05.³⁸ This cost, along with potential impacts on water yields resulting from climate change, provide a strong case for Hunter Water to take reasonable steps to reduce energy usage and greenhouse gas emissions.

Delta Electricity currently operates a hydroelectric plant at Chichester Dam in conjunction with Hunter Water which generates renewable energy, saving up to 430 tonnes per annum of greenhouse gas emissions. Hunter Water's environmental management plan contains targets for Hunter Water to identify other possible sites for hydroelectric facilities, including investigations into the feasibility of installing power generating turbines in the water supply system itself. Potentially these hydroelectric schemes allow Hunter Water to sell the renewable energy generated to electricity retailers for profit.³⁹

The NSW Government has recently required all businesses and NSW government agencies using more than ten gigawatt hours per year at a site to prepare energy savings action plans. These plans essentially require businesses and agencies to examine energy usage in their operations and identify where cost effective energy savings can be made.⁴⁰ Hunter Water is required to prepare an action plan with respect to the energy usage associated with pumping from the Tomago sandbeds.

The Operating Licence requires Hunter Water to participate in the Energy Smart Business Program, or similar program administered by the Sustainable Energy Development Authority. Hunter Water complied with this requirement until the program was disbanded in June 2005.

The Tribunal notes that because water agencies need to treat both water and wastewater and to transport it through distribution and collection systems, they tend to be relatively energy intensive and to some degree their level of consumption is outside their control. It is also important to note that shifts to higher wastewater treatment standards tend to drive increased energy consumption.

³⁶ Data supplied by the Department of Energy, Utilities and Sustainability.

³⁷ A typical household using off-peak electricity in Energy Australia's area of operations uses 8900 kilowatt hours of electricity. See IPART, *NSW Electricity Regulated Retail Tariffs 2004/05 to 2006/07*, June 2004, p 21.

³⁸ Data supplied by the Department of Energy, Utilities and Sustainability.

³⁹ As a result of these investigations, a second plant has been installed in the gravity main from Chichester to Dungog.

⁴⁰ www.deus.nsw.gov.au

One option for the new Operating Licence could be for Hunter Water to simply report on progress made in reducing energy consumption and increasing renewable energy. This requirement could be supported by indicators covering electricity consumption, emission of greenhouse gases, and generation and use of renewable energy as listed in Appendix B (see indicators 15 and 16).

How appropriate are the environmental and ESD indicators outlined in clause 9.2.6 of the operating licence?

8 SYSTEM PERFORMANCE

The Act requires the Operating Licence to specify the quality and performance standards that Hunter Water's water supply, sewerage, drainage and wastewater disposal systems and services must meet.⁴¹

The Tribunal considers that Hunter Water's systems and services includes the structures and other assets it builds, owns and operates for the purpose of supplying water, sewerage, drainage or wastewater disposal services. They also include the systems it has in place for managing its impact on the environment, engaging with the community and its customers, serving its customers and managing its assets.

8.1 Obligations to meet performance standards and monitor performance indicators

In a competitive market, there are strong incentives for a business to maintain and operate its systems in a way that ensures it can provide a quality service that satisfies customer needs and preferences—if it does not, customers can choose to switch to an alternative supplier. However, in a monopoly business, such as Hunter Water, these incentives are not as strong. This creates a risk that the organisation's system performance may not be at appropriate levels.

Regulators often manage this risk by including obligations in the operating licence for the business to meet specified performance standards. These standards usually represent what is considered to be an appropriate minimum standard. Including them in the licence:

- increases the organisation's incentives to achieve appropriate performance and service quality standards (as failure to do so will mean it breaches its licence)
- increases management's accountability for achieving appropriate performance and service standards
- provides a basis for monitoring and reporting on the ongoing performance of the business.

Regulators also use performance indicators in conjunction with, or as a substitute for, performance standards. Including performance indicators in the Operating Licence does not require the business to meet a specific performance standard—it only requires it to report on the level of performance achieved. This can enable regulators and other stakeholders to:

- compare the business' recent performance with its performance in earlier time periods or the performance of similar businesses, which can provide it with an incentive to improve its performance over time
- provide additional information related to the areas covered by system performance standards
- provide information related to areas for which there are no appropriate performance standards
- inform the decision making processes of regulatory agencies, governments and the organisation.

⁴¹ Section 13, *Hunter Water Act 1991*.

It must also be appreciated that compliance with System Performance Standards and the measurement and verification of System Performance Indicators have the capacity to impose substantial cost burdens on water utilities. The Tribunal is mindful that obligations to meet standards and measure indicators could potentially increase the cost of business for the utility, in which case, higher costs could flow on to customers in the form of higher prices.

In its consideration of appropriate System Performance Standards and Indicators, the Tribunal will be seeking to ensure that the benefit of any higher standard or reporting of additional indicators exceeds the associated cost.

8.2 Current System Performance Standards

Hunter Water's current system performance indicators are set out in Schedule 4 of the Operating Licence and discussed further below. Clause 7.3 of the current Operating Licence includes three System Performance Standards. These relate to water supply continuity, water supply pressure and sewage overflows.

Water Continuity Standard - 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 - 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 - 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.

Hunter Water's recent record of compliance against these three system performance standards is shown graphically in Appendix C. In the last ten years, Hunter Water has complied with all system performance standards, with the exception of the Water Continuity Standard in 2003/2004. In that year, the audit found that 15,248 properties experienced a water discontinuity, compared with the standard of 14,000. This was preceded by 13,966 properties experiencing water discontinuities in 2002/03.

Hunter Water argued that the results in 2002/03 and 2003/04 are not directly related as water continuity performance in 2002/03 was impacted upon by a larger than expected number of planned interruptions (necessitated by the need to connect new dwellings to the water supply system), whilst the 2003/04 non-compliance was largely the result of a trunk main failure in November 2003, which affected around 5,500 properties.

Over 2003/04, Hunter Water introduced a range of initiatives to improve underlying performance in terms of planned interruptions, such as additional expenditure to improve the reliability of its trunk main assets (and thereby reduce unplanned interruptions).

The current Operating Licence has no requirements relating to drainage. This reflects the complex nature of the ownership and administration of these assets.

8.3 System Performance Standards and Indicators in the New Operating Licence

The Tribunal has engaged consultants, GHD Limited, to advise it on any changes that would be appropriate to system performance standards or indicators in the Operating Licence.

The Tribunal's terms of reference to GHD require them to consider the following key issues:

- Are the current system performance standards and indicators appropriate to the operations of Hunter Water for the protection of customers and the maintenance of the system's integrity?
- How, if at all, can the specification, measurement, reporting and monitoring of the current system performance standards and indicators be improved?
- Should the system performance standards and indicators specify some measure of accuracy to provide the Tribunal with confidence in the robustness of reported data?
- Should a Monitoring and Reporting Protocol be established for Hunter Water?
- Should any new system performance standards and indicators be included in the Operating Licences for Hunter Water? Should any existing standards or indicators be deleted from this Licence?
- Whether current standards should be amended (for example, tightened or relaxed) based on Hunter Water's recent performance levels, and financial considerations?
- Whether alternative or supplementary means exist to ensure that Hunter Water delivers acceptable system performance and the appropriateness of alternative measures of system performance?
- Whether it would be appropriate to have similar or consistent standards for Hunter Water and Sydney Water?

The Tribunal expects to receive the consultant's report in September 2006, after which it will publish and consider this report. The findings of the report will be presented at the public workshop.

8.4 Obligations to develop and implement asset management strategies

Performance standards provide some oversight of asset management. Performance against standards or indicators reflects the condition and effectiveness of the organisation's assets. Hence, deterioration against the standards and indicators may indicate problems in the condition of the organisation's infrastructure.

However, standards and indicators reflect past or current asset management practices, rather than looking into the future. As a result, they may not reveal problems with asset management until after they have occurred. To address this issue, regulators often include obligations related to the development and implementation of suitable asset management strategies in operating licences. The need to include asset management provisions in Hunter Water's Operating Licence, and possible objectives for these provisions, are discussed below.

Need for asset management provisions in the Operating Licence

Hunter Water has experience in asset management, including developing and implementing asset management strategies. A significant part of its current asset management program is driven by growth in the Hunter Region, the requirements of the Operating Licence (particularly system performance standards), and Dam Safety Committee requirements, which are aimed at ensuring that Hunter Water's dams are adequately maintained and managed.

Nevertheless, the Tribunal believes that this is an area that should be directly addressed in the Operating Licence. The inclusion of asset management provisions or obligations in the licence can provide transparency and assurance to stakeholders, via the audit process. This is important, as a decline or failure of Hunter Water's system performance could impact significantly on customers, the environment and the wider community.

Hunter Water's Operating Licence does not currently have any provisions relating to asset management.

Possible objectives of asset management provisions in licence

The Tribunal will consider the appropriate objectives of including asset management provisions in Hunter Water's Operating Licence. GHD, one of the consultants the Tribunal engaged to assist in its review of the operating licences of Sydney Water and the SCA, proposed the following objectives for the provisions included in those licences:

- to provide confidence to the Tribunal and stakeholders that the organisation is managing its assets sustainably and efficiently over their whole life cycle
- to provide assurance that:
 - the organisation's assets will meet required service levels now and into the future
 - assets are provided at an efficient, sustainable and affordable cost
 - asset risk is effectively managed to minimise the risk of system failures to customers, other stakeholders and the wider community
- to drive or facilitate continuous improvement in asset management
- to provide adequate communication and transparency, through reporting and independent auditing of asset management.

Appendix D sets out the resulting asset management licence obligations now contained in Sydney Water's operating licence. Similar asset management provisions are now included in the operating licences for State Water and the SCA.

What quality and performance standards should be specified in the licence in respect to service interruptions and other matters?

Under what operating licence terms and conditions should Hunter Water be required to:

- a. *provide, construct, operate and maintain efficient, co-ordinated and commercially viable systems and services for supplying water, providing sewerage services and disposing of wastewater?*
- b. *provide, operate, manage and maintain a drainage service?*

9 MANAGING THE SUPPLY AND DEMAND FOR WATER

Drought conditions experienced in recent years have served to highlight the value of water. Low rainfall coupled with growing populations have placed considerable pressure on existing water sources in a number of centres – forcing water supply authorities to undertake new supply augmentation and demand management initiatives.⁴² To date, the lower Hunter region has been relatively insulated from the drought owing to the reliable rainfall received in coastal storages. However, storage levels have fallen over 2006 and Hunter Water's Drought Management Plan provides for water restrictions to be introduced if storage levels fall to 60 per cent of capacity.

Hunter Water's principle vehicle for managing supply and demand is its Integrated Water Resource Plan (IWRP). In accordance with requirements of the current Operating Licence, Hunter Water developed an initial IWRP in 2002. The IWRP aims to find the best solutions to meet future water demands after appropriate consideration of social, economic and environmental factors. It treats both demand management and supply development options equally so that the optimal sequencing of demand and supply options is identified.

The Tribunal believes that managing the supply and demand for water is a key issue for this review and seeks comment on what options are appropriate for inclusion in Hunter Water's new Operating Licence. Specifically, the Tribunal seeks comment on:

- Whether the Integrated Water Resources Plan remains appropriate to guide Hunter Water in planning for the future water needs of the Lower Hunter region (this is discussed further in **section 9.1**).
- The role of supply augmentation in managing the supply/demand balance (this is referred to in **section 9.2**).
- Whether Hunter Water's existing water conservation targets should be enhanced (see **section 9.2**).
- If additional requirements covering leakage, recycling, security of supply and incentives for demand management are cost-effective (this is dealt with in **section 9.2**).

9.1 Current obligations

As mentioned above, the current Operating Licence requires Hunter Water to have in place an IWRP to manage demand and supply for water. The main feature of the current IWRP was to increase the storage capacity of Grahamstown dam, allowing Hunter Water to pump additional water from the Williams River during high flows. The upgrade increased the annual sustainable yield by 5,500 Megalitres to 79,000 Megalitres.⁴³

⁴² These initiatives include the introduction of permanent water restrictions in Melbourne, construction of a \$387 million seawater desalination plant in Perth, increased water recycling and access to groundwater reserves in Sydney and consideration of reusing treated effluent for drinking water purposes in Toowoomba and Goulburn. See www.watercorporation.com.au/D/desalination.cfm.

⁴³ Hunter Water Corporation, *Integrated Water Resource Plan Annual Report 2003-04*, p 10.

Under the current IWRP, Hunter Water also set demand management targets to achieve ongoing water savings of 1,000 Megalitres and to increase the level of recycling to 13 per cent of dry weather flows by 2007.⁴⁴ Hunter Water has sought to ensure that customers receive a reliable water supply that is not interrupted too frequently by water restrictions – aiming to ensure that under the IWRP, restrictions occur only once every 10 years on average, with a maximum duration of six months over a 10 year period (or 5 per cent of the time) on average.⁴⁵

9.2 Options for the new Operating Licence

Most large urban centres in Australia are facing the challenge of securing additional water supplies to sustain growing populations, in the face of possible climate change. For example, the NSW Government's Metropolitan Water Plan to secure Sydney's water supply sets out a mix of measures to boost supply, as well as committing to additional water saving and recycling initiatives.⁴⁶

The Tribunal believes that, since 2002, a number of factors influencing demand and supply have changed and the IWRP is in need of review. Major challenges are posed by the supply needs of the Central Coast and recent revisions to population projections. Hunter Water accepts this view and has commenced a review of the IWRP which will be completed over the next 18 months and will include public consultation as required by Section 8.3.3 of the current licence.

Supply augmentation

Hunter Water's strategy in the current IWRP is heavily weighted towards supply augmentation. Hunter Water came to the view that this represents the least cost approach based on an assessment of financial, social and environmental costs. Further supply augmentation options are likely to be more expensive and this may influence the overall mix of options used by Hunter Water in future.⁴⁷

Demand management Initiatives

Hunter Water currently aims for an annual water savings of 1,000 Megalitres through a range of demand management initiatives. For 2004/05, Hunter Water estimated that it saved 2,511 Megalitres, considerably more than the targeted 1,000 Megalitres, through water recycling, replacing leaky pipes and retrofitting homes with water efficient appliances.

The IWRP notes that water savings of double the targeted amount are possible.⁴⁸ There also appears to be some community support for a more aggressive approach to demand management. A recent customer survey conducted by Hunter Water found 61 per cent of respondents believe not enough is being done to address water conservation issues and 81 per cent of respondents view Hunter Water's role in encouraging water efficiency as very important.⁴⁹

⁴⁴ Hunter Water Corporation, *Integrated Water Resource Plan*, March 2003, pp 9, 15.

⁴⁵ *Ibid*, p 39.

⁴⁶ NSW Government, *2006 Metropolitan Water Plan*, April 2006, p 15.

⁴⁷ Hunter Water Corporation, *Integrated Water Resource Plan*, March 2003, p 64.

⁴⁸ Hunter Water Corporation, *Integrated Water Resource Plan*, March 2003, p 9.

⁴⁹ Ipsos, *2005 Domestic Customer Perceptions Survey*, 23 November 2005, p vi.

While there may be room to set more challenging water conservation targets, Hunter Water's expenditure on existing demand management programs in 2004/05 was over \$4 million and any additional costs associated with more aggressive strategies is likely to be borne by customers through higher water prices.⁵⁰

Water Conservation Targets

The current Operating Licence requires Hunter Water to hold average water consumption by residential properties at or below 215 kilolitres per annum calculated on the basis of a five year rolling average.⁵¹ To date, Hunter Water has been successful in this regard, with water consumption against the target being only 204.8 kilolitres in 2005/06.⁵²

Options for water conservation targets in the Operating Licence include:

1. **The existing targets** – this allows consistency between the current and new Operating Licences. However, the existing 1,000ML target in the IWRP (as discussed in section 9.1 above) lacks a baseline year with which to assess performance, while the residential property consumption target excludes non-residential water consumption.
2. **Per capita performance targets** – this target includes all water consumption and utilises the same reporting format as used by Sydney Water. Like the existing per property target, this form of target allows for population growth.
3. **Cap total volume of water drawn from storages** - this target is relatively easy to understand and allows the target to be linked to the 'sustainable yield' from Hunter Water's storages. However, it does not allow for population or industrial growth. To address this, the cap could be supported by per capita usage indicators.⁵³
4. **Percentage reduction of forecast demand** – this target requires Hunter Water to reduce demand compared to a baseline demand forecast that accounts for expected population trends. Baseline forecasts may be difficult to establish.
5. **Cost-effectiveness standard** – this requires Hunter Water to invest in the most cost-effective demand management programs and continue implementing less cost-effective programs until the cost of saved water reached a specific target level, most likely the cost of alternative new sources. In principle, this is the most efficient target. However, problems in reliably measuring the cost-effectiveness of demand management options may make this type of target very difficult to monitor and enforce.⁵⁴

The Tribunal would like to emphasise that assessing performance against any of these forms of targets can be complicated. For example, performance can be affected by changes in the composition of housing stock, extreme weather conditions and the emergence of new industries, making it difficult to determine if a utility has drifted temporarily or permanently

⁵⁰ Hunter Water Corporation, *Integrated Water Resource Plan, Annual Report 2004-05*, p 22.

⁵¹ This target is contained in clause 8.4 of the *Hunter Water Corporation Operating Licence 2002-2007*. As such, Hunter Water may be liable for statutory penalties under the *Hunter Water Act 1991* should it fail to meet this target.

⁵² Pers comm., Hunter Water Corporation, 18 July 2006.

⁵³ Any cap on total volume of water drawn from storages would need to be recognised and be consistent with entitlements in DNR Water Sharing Plans.

⁵⁴ T.W. Chesnutt, *Performance Standards for Demonstrating Urban Water Conservation* A Briefing Book prepared for California Urban Water Agencies, June 1997, pp 9-10.

outside a target range.⁵⁵ There are mechanisms to take these further factors into account, but usually at the expense of further complexity.

Ambitious water conservation targets may be difficult to consistently achieve – utilities cannot simply ‘turn off the tap’ on consumers and have limited control over many of the factors that influence the demand for water – such as income levels, property size, industrial growth and climatic influences (temperature and rainfall). Therefore, it may be useful to focus effort on individual components of the demand and usage of water – areas in which Hunter Water may exercise more control. The following measures could also be adopted in conjunction with an overall water conservation target.

Reducing leakage

Some leakage is inevitable and Hunter Water endeavours to reduce this through an active leakage control program. However, greater emphasis could be placed on reducing losses through setting leakage reduction targets or minimum response times to water main breaks. These requirements have been applied in Sydney Water’s operating licence.⁵⁶

An advantage of this approach is that it predominately relates to the maintenance of Hunter Water’s own assets – an area where the Corporation has a high degree of control. On the other hand, depending on how high the target is set, the costs of the leakage remedy may exceed the cost of the water saved. Leakage targets may lead to perverse outcomes, especially when considered in conjunction with a water continuity system performance standard or a water pressure standard. Further, the Tribunal notes that leakage is subject to an NWI benchmarking indicator.

Promoting recycling

It is likely that generalised recycling targets within the Operating Licence can only be achieved if the cost of recycled water is subsidised by all customers. In a recent draft determination, the Tribunal agreed that where recycling schemes provide benefits (such as deferring supply augmentation that would otherwise be passed on to customers via bills) to all customers, it may be appropriate that the costs associated with the scheme be recovered across the customer base.⁵⁷

The approach taken in Sydney Water’s operating licence is for targets to be set to increase recycling and decrease use of potable water within the utility’s sewage treatment plants.⁵⁸ This approach has the advantage of being well within Hunter Water’s control.

Relaxing the security of supply criteria

The security of supply rules aim to ensure that on average, restrictions occur only once every 10 years and with a maximum duration of six months in this 10 year period (or five per cent of the time). The sustainable yield from the catchments could be boosted by relaxing these rules. However, the trade-off for the additional supply would be more frequent restrictions as the existing supply would be allowed to run down at a faster rate and become more vulnerable to long term droughts. Recent research suggests that there may be some support

⁵⁵ Ibid, p 7.

⁵⁶ See clauses 4.11 and 4.13, *Sydney Water Corporation Operating Licence 2005-2010*.

⁵⁷ IPART, Draft Report, *Pricing arrangements for recycled water and sewer mining*, Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council, July 2006, pp 32-33.

⁵⁸ Clause 7.3, *Sydney Water Corporation Operating Licence 2005-2010*.

for this type of approach, with 61 per cent of Hunter Water customers surveyed supporting some form of permanent water restrictions.⁵⁹

Providing incentives for water efficiency and recycling initiatives

One of the most successful aspects of Hunter Water's demand management strategy has been the promotion of water and energy efficiency appliances (in conjunction with Energy Australia and five local councils). In 2003/04, 6,727 kits containing water and energy efficient appliances were installed and funding was provided for a further 5,000 kits in 2004/05.⁶⁰ This initiative is already saving an estimated 100 Megalitres per year. Hunter Water also provided rebates for rainwater tanks provided they are connected a home's internal plumbing for use in toilet flushing or other internal household uses.⁶¹

How effective is the Integrated Water Resource Management Plan (IWRMP) and what outcomes have been achieved?

With respect to the IWRMP, what targets, standards, indicators or other proposals has Hunter Water formulated for consideration as part of this review?

⁵⁹ Ipsos, *2005 Domestic Customer Perceptions Survey*, 23 November 2005, p vii.

⁶⁰ Hunter Water Corporation, *Integrated Water Resources Plan, Report to IPART 2004-05*, p 4.

⁶¹ Hunter Water Corporation, *Water Efficiency pamphlet*, August 2004.

10 CUSTOMER SERVICE STANDARDS AND CONSUMER RIGHTS

Hunter Water's Operating Licence is designed to protect the rights of customers who rely on the essential services provided by it. Hunter Water is a monopoly service provider. Most customers cannot switch to an alternative supplier if they are unhappy with the service provided. The Operating Licence provides a substitute for market forces by mandating minimum levels of customer service, and ensuring that Hunter Water takes the views of customers and the community into account in its decision-making. It does this through requirements on Hunter Water to:

- Monitor and report against customer service indicators, including response times to complaints, telephone and account contacts (currently Hunter Water reports on a number of these indicators – see **section 10.1**).
- Provide flexible payment options and hardship policies via a code of practice and procedure for debt and disconnection (see **section 10.2**).
- Develop a new customer contract. (A new customer contract for Hunter Water was introduced in September 2003 - see **section 10.3**).
- Establish complaint handling and dispute resolution processes to ensure that customer grievances are addressed (Hunter Water is required to have internal complaint handling procedures in place, and also to participate in an external dispute resolution scheme – see **section 10.4**).
- Facilitate community involvement in Hunter Water's operation via regular consultation with Hunter Water's consultative forum (see **section 10.5**).

10.1 Existing customer service indicators

In 2002, the former Minister for Energy and Utilities directed Hunter Water to annually report against a range of customer service indicators covering:

- Time taken to provide a substantive response to complaints and account contacts.
- Response times to telephone calls.
- Number of metered accounts not based on at least one meter reading per annum.
- Number of disconnections, flow restrictions, debt recovery actions and customers assisted through payment options. Hunter Water's performance against these indicators is discussed in **section 9.2** in the context of the code of practice and procedure for debt and disconnection.

While they are not formally included in the Operating Licence, Hunter Water has been reporting in accordance with this Ministerial direction since 2002/03. Some of these indicators are similar to those used by Sydney Water.

Hunter Water has recently introduced a number of initiatives to improve customer service performance, such as the establishment of a case investigation team to improve the handling of complaints and has commenced a telephone system upgrade to improve responsiveness to customer calls.⁶²

⁶² IPART, *Hunter Water Corporation Operational Audit 2004/2005*, p 105.

Reporting against customer service indicators is commonplace amongst water and energy utilities within Australia, reflecting the importance of delivering high quality service to customers. The recently developed NWI Benchmarking Project includes the customer service indicators set out in the following box. These indicators have been agreed by all States and will be collected for all water utilities in Australia and publicly reported. Some of these indicators cover areas normally considered in other sections of the Operating Licence.

Box 10.1 Customer Service Indicators – National Performance Framework⁶³

Water quality complaints (per 1,000 properties)
Number of sewage odour complaints (per 1,000 properties)
Complaints meaningfully responded to within 2 days (%)
Sewerage service complaints (per 1,000 properties)
Total water service complaints (per 1,000 properties)
Billing and account complaints – water and sewerage (per 1,000 properties)
Total sewerage complaints (per 1,000 properties)
Average connect time to a telephone operator (seconds)
Average duration of an unplanned interruption - water (minutes)
Average break/ choke repair time - sewerage (hr)
Customer interruption frequency - water
Customers to which restrictions or legal action applied for non-payment of water bill (per 1,000 properties)

To avoid duplication of regulation, the Tribunal suggests that, where the NWI indicators explore an area similar to that examined by an existing indicator, then the NWI indicator should prevail.

An alternative approach to collecting and publishing results of indicators is the introduction of mandatory minimum standards for certain customer service measures, for instance requiring minimum response times to customer complaints or telephone calls. In such a situation, Hunter Water would be required to report compliance against these standards annually. It should be noted that this approach may be inflexible and costly, particularly given the large number of customer contacts received annually by Hunter Water. An intermediate step would be to specify a “desirable range” for performance, allowing greater flexibility.

10.2 Debt and disconnection procedures

In accordance with the current Operating Licence, Hunter Water has established a code of practice and procedure on debt and disconnection. The code:

- provides for deferred or instalment payment options for consumption bills
- provides for these payment options to be advised in bills
- is included in the Customer Contract.⁶⁴

⁶³ National Water Commission, *National Performance Framework, 2006 urban performance reporting indicators and definitions, a handbook for WSAA members*, 2006

⁶⁴ Clause 5.3, *Hunter Water Corporation Operating Licence 2002-2007*.

Hunter Water is also required to report annually on a range of indicators for debt and disconnection including the total number of disconnections and flow restrictions, debt recovery levels, and the number of customers assisted through payment support and instalment options.

Hunter Water bills the property owner and outstanding debts are accumulated against the property. This allows Hunter Water to recover debt via deceased estates or when properties are sold. As a result, Hunter Water recovers almost all monies owed.

Hunter Water seeks to assist customers facing genuine financial hardship through provision of flexible payment options and participation in the Payment Assistance Scheme. This scheme allows welfare agencies to issue vouchers to customers facing financial difficulties for part or whole payment of their outstanding accounts. It also safeguards vulnerable customers by not restricting or disconnecting pensioners or those using kidney dialysis.

While the Tribunal is not reviewing the Customer Contract as part of this review, there are a number of issues associated with debt and disconnection that may require the code of practice to be reviewed. These include:

- Shielding customers from interest charges while they make payments according to a mutually agreed schedule.
- Delaying debt recovery action until outstanding disputes over billing are investigated or mediated by the Energy and Water Ombudsman.
- Extending existing water saving retrofitting programs to customers facing financial difficulty – this is a feature of similar hardship programs run by Country Energy and Yarra Valley Water, and would allow Hunter Water customers to reduce the size of their bills by saving water.
- Requiring Hunter Water to participate in Centrepay – this scheme allows utility and other bills to be paid by having a regular amount deducted from Centrelink payments, thereby avoiding any direct debit fees.⁶⁵ The Tribunal notes that many utilities already offer Centrepay, including all major NSW electricity and gas utilities.

10.3 Customer contract

The Act requires that Hunter Water set out the terms and conditions of service in a standard customer contract, and provides that any landowner whose property is connected to a Hunter Water main is taken to have entered into a customer contract with the agency.⁶⁶ Hunter Water introduced a new Customer Contract on 1 September 2003, following a full public review process conducted by the Tribunal. The full text of the customer contract can be downloaded at Hunter Water's website.⁶⁷

The Tribunal is unaware of any significant concerns with the operation of Hunter Water's current customer contract. The Tribunal does not envisage making changes to the customer contract, but believes it would be appropriate to retain the existing requirement for the contract to be reviewed during the term of the Operating Licence.

⁶⁵ www.centrelink.gov.au/internet/internet.nsf/services/centrepay.htm

⁶⁶ Section 35 and 36, *Hunter Water Act 1991*.

⁶⁷ www.hunterwater.com.au/customercontract.asp

10.4 Complaint handling procedures

Complaint handling requirements are important in allowing customers to seek and obtain information and redress from Hunter Water. These requirements also provide a tool for highlighting systemic faults and the views of customers on system performance which can, in turn be factored into asset management and planning processes.

Internal dispute resolution procedures

The Operating Licence requires Hunter Water to establish internal complaints handling procedures based on the Australian Standard. The Licence requires Hunter Water to provide information to customers on how to use these procedures, and to report annually on the number and types of complaints they receive and how these complaints were resolved.⁶⁸

To date, Hunter Water has complied with all Operating Licence requirements relating to its internal complaints handling procedures. Standards Australia recently released an updated Australian Standard for complaint handling. The current review provides an opportunity for this new standard to be applied in Hunter Water's new Operating Licence.

Hunter Water has two advertised telephone contact numbers, a 'Customer' line and an 'Emergency' line. If a customer rings the 'Customer' line to complain about Hunter Water's service, this call is logged as a customer complaint. However, calls to the 'Emergency' number are defined as service faults unless the caller requests that the contact be treated as a customer complaint. Normally, Hunter Water will respond to service faults by sending a crew to undertake corrective action. In 2004/05, Hunter received 1,940 complaints and 9,215 service faults reports.

It can be argued that calls to report service faults (such as low pressure or sewage overflows), particularly where a customer requests corrective action from Hunter Water, may fall within the Australian Standard definition of a complaint, namely, "any expression of dissatisfaction with a product or service offered or provided".⁶⁹ Hunter Water has addressed this concern by reporting the number of complaints and service faults as part of Operating Licence audits.

The current licence requires Hunter Water to report various complaint types by suburb. The intent of this requirement is to ensure that localised or recurrent service problems are identified and addressed by Hunter Water. To date, trends are not evident from this reporting, with the exception of reporting for sewage overflows, which indicates that at least seven suburbs receive consistently high numbers of overflow events. Hunter Water has recently announced work to upgrade the sewerage system in order to reduce overflows in several of the affected suburbs.

While Hunter Water has fully complied with this requirement, it has previously expressed concerns about the onerous nature of this provision – which necessitates reporting against seven complaint categories across approximately 200 suburbs in the area of operations.

Possible alternatives to reporting complaints by suburb include requiring reporting of the number of properties receiving multiple overflows, water supply interruptions and low pressure events. Hunter Water already reports against indicators capturing 'repeat' events of

⁶⁸ Clause 12.1, *Hunter Water Corporation Operating Licence 2002-2007*.

⁶⁹ Standards Australia, Australian Standard on Complaints Handling AS 4269-1995, p 6.

this type and these could be used directly or modified slightly to highlight systemic service problems.

External dispute resolution processes

Hunter Water is required to participate in an independent external dispute resolution scheme. It must report annually to the Tribunal on the functioning of this scheme, and the number and type of complaints made to the scheme or to other bodies (such as courts or tribunals) and any systemic problems identified.⁷⁰

Hunter Water satisfies the requirement to participate in an independent external disputes resolution scheme through its membership of the Energy and Water Ombudsman New South Wales (EWON) scheme. This scheme is funded by the participating utilities, and investigates and resolves complaints for customers of participating utilities for no charge.

EWON has expressed concern with the onerous and costly reporting requirements expected of the external dispute resolution body by Clause 12.2.9 of the Operating Licence. EWON also believes that the operation of the clause may breach privacy requirements. Sydney Water's operating licence was modified to overcome these concerns. The corresponding requirements for Sydney Water are now:

Sydney Water must report each year to IPART based on information available to Sydney Water and information reasonably obtained from the dispute resolution body. The report must take into account any issues raised by the dispute resolution body and must contain the following information:

- (a) *the number and types of complaints received by the dispute resolution body, classified in accordance with the dispute resolution body's reporting arrangements; and*
- (b) *any other relevant information required by IPART to be included in the report.*

Hunter Water is also required to report on complaints against it which are made to courts or tribunals. Since 2002/03, 11 such complaints have been made against Hunter Water.

10.5 Effectiveness of the consultative forum

The Act requires Hunter Water to "...consult with its customers at regular intervals...".⁷¹ The Operating Licence requires it to establish and regularly consult with a consultative forum made up of representatives from the community and specific interest groups. These requirements ensure that Hunter Water consults with the community about its operations and considers community views when making decisions. Hunter Water is required to provide the consultative forum with all information necessary to fulfil its functions and to facilitate a charter to govern the operation, membership and resourcing of the forum.⁷²

The Tribunal is not aware of any significant concerns over the functioning of the consultative forum. Previous Audits have noted the positive comment received from forum members on the effective operation of the group.⁷³

⁷⁰ Clauses 12.2 and 12.3, *Hunter Water Corporation Operating Licence 2002-2007*.

⁷¹ Section 13 (2), *Hunter Water Act 1991*.

⁷² Clause 5.4, *Hunter Water Corporation Operating Licence 2002-2007*.

⁷³ IPART, *Hunter Water Corporation Operational Audit 2004/2005*, p 26.

What terms and conditions are required in the operating licence to protect customer standards and consumer rights?

How effective is the Consultative Forum and is its charter being complied with?

11 OPERATIONAL AUDITS OF THE LICENCE

The Tribunal uses operational audits to monitor and report to the Government on compliance with Operating Licence requirements. Such audits also inform stakeholders and the community of an organisation's performance in a range of areas. The Tribunal is required to prepare operational audits of Hunter Water in accordance with the Operating Licence.⁷⁴ The Operating Licence sets out the frequency, scope and role of the audit.⁷⁵

The current Operating Licence for Hunter Water requires a comprehensive review of the Licence each audit. However, recent water agency submissions to the Tribunal have questioned this approach to auditing. They argue that this lack of flexibility (i.e. a fixed audit scope, with all auditable requirements subject to scrutiny each year) is unnecessarily costly to their businesses.

Use of a more targeted, risk management approach to auditing was advocated in the review of Sydney Water, State Water and the SCA operating licences, as an alternative to the existing regime of annual comprehensive audits. This approach could involve high risk areas of the licence being subject to an annual independent audit, with lower risk or less critical areas monitored through self-reporting.⁷⁶

The Tribunal accepted these arguments and included a risk-based approach in defining the scope of these operating licence audits. The Tribunal has recently been developing a policy for the application of a risk-based approach to defining the scope of operating licence audits.

Under this approach the first operational audit of a new operating licence would need to be a comprehensive audit covering all aspects of the licence. Subsequent auditing and reporting arrangements could then be based on the outcomes of this initial comprehensive audit. In making this assessment, the Tribunal could take into account a number of factors, including:

- levels of compliance achieved during the initial audit, where applicable
- auditor recommendations as part of the initial audit
- the nature of the risks involved in the particular licence area.

What functions should be conferred or imposed on the Tribunal by the operating licence in connection with operational audits of the Corporation?

What terms and conditions should be included in the operating licence on how the Tribunal prepares the operational audit?

⁷⁴ Section 18C, *Hunter Water Act 1991*.

⁷⁵ See section 11, *Hunter Water Corporation Operating Licence 2002-2007*.

⁷⁶ Factors considered by the Essential Services Commission (ESC) in assessing risk in the Victorian water industry include: Cost to customers or the public; Danger to public health or safety; Damage to property; Loss or reduction of essential service; Environmental damage; Adverse public reaction.

APPENDIX A HUNTER WATER'S CURRENT ENVIRONMENTAL AND ESD INDICATORS

Environmental and ESD Indicator	Environmental and ESD Performance Measure
<i>Water Resources</i>	
1 Compliance with the Operating, Monitoring and Reporting conditions of the Water Management Licence (WML) issued under the Water Act*	<ul style="list-style-type: none"> Annual report on compliance and any reports of non-compliance to the Department of Infrastructure, Planning and Natural Resources (DIPNR).
2 Catchment management	<ul style="list-style-type: none"> Key indicators from the annual Catchment Management Report (Operating Licence, Section 10.1).
3 Environmental releases from Chichester Dam	<ul style="list-style-type: none"> When the combined inflows from the Chichester and Wangat Rivers are equivalent to, or greater than, 14 ML/day, Hunter Water shall maintain a minimum flow release of 14 ML/day from Chichester Dam. When combined inflows from the Chichester and Wangat Rivers into Chichester Dam are less than 14 ML/day, Hunter Water Corporation shall maintain an equivalent daily flow release from Chichester Dam.
4 Extraction of water at Chichester Dam	<ul style="list-style-type: none"> Annual extraction volume relative to the Water Management Licence limit (cl 3).* Graphical five year trends.
5 Extraction of water from Tomago aquifer	<ul style="list-style-type: none"> Annual extraction volume relative to the Water Management Licence limit (cl 7). Maximum daily extraction level relative to the maximum daily limit in c7.6 of the WML.* Average daily extraction level as proportion of maximum. Graphical five year trends.
6 Extraction of water from the Williams River	<ul style="list-style-type: none"> Annual extraction volume including total flow and total extraction by Hunter Water Corporation.
7 Extraction of water from Anna Bay aquifer	<ul style="list-style-type: none"> Annual extraction volume relative to the Water Management Licence limits (cl 8.5).*
8 Water levels in Seaham Weir Pool	<ul style="list-style-type: none"> Report on Seaham Weir Pool water levels and compliance with the Water Management Licence*
9 Mean monthly water table levels at Tomago	<ul style="list-style-type: none"> Mean water table levels as required by Water Management Licence, c7.7 compared to 1.0m reference level. Comments on strategies if below 1.0m level.*
10 Mean monthly water table levels at Anna Bay	<ul style="list-style-type: none"> Extraction of water from the Tomaree groundwater source shall be in accordance with the Water Management Licence cl 8.5* (extraction will not exceed 11,000 ML in any three-year rolling period).
11 Movement of salt water interfaces at Anna Bay	<ul style="list-style-type: none"> Graphical representation of quarterly movement in salt water interface. Water Management Licence, cl 8.6*
12 Residential sector water use	<ul style="list-style-type: none"> Kilolitres / household / annum (5 year rolling average)
13 Commercial sector water use	<ul style="list-style-type: none"> Total Megalitres / annum (5 year rolling average)

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Environmental and ESD Indicator		Environmental and ESD Performance Measure
14	Industrial sector water use	<ul style="list-style-type: none"> Total Megalitres/annum (5 year rolling average)
15	Industrial and commercial water use (excluding use by Large Customers)	<ul style="list-style-type: none"> Total Megalitres/annum
16	Large Customers water use (40 largest users)	<ul style="list-style-type: none"> Total Megalitres/annum
17	Total Water Supplied	<ul style="list-style-type: none"> Total kilolitres of water supplied to customers (5 year rolling average).
18	Water Restrictions	<ul style="list-style-type: none"> Number of days/year when water restrictions are imposed on customers
19	Non-revenue water (water loss)	<ul style="list-style-type: none"> In ML and % of source supply per year. Separate into component
<i>Wastewater</i>		
21	Compliance with DEC wastewater treatment plant conditions	<ul style="list-style-type: none"> Flow weighted compliance as reported for Open Board
22	Effluent quality	<ul style="list-style-type: none"> Exceedances for BOD, NFR, Grease and Oil, P and N as produced for Open Board
23	Sewerage Treatment	<ul style="list-style-type: none"> Number and capacity of wastewater treatment plants by level of treatment
24	Bathing beach water quality	<ul style="list-style-type: none"> Key indicators from Beachwatch data
25	Recycling water	<ul style="list-style-type: none"> Direct and indirect reuse as currently calculated Proportions of total average dry weather flow Graphical five-year trend representation
26	Biosolids Reuse	<ul style="list-style-type: none"> Annual tonnage (dry tonnes) and proportions of dewatered biosolids available for reuse Recycled for agriculture Recycled for mine rehabilitation Municipal waste minimisation, (eg co-composting, vermiculture) Disposed of to landfill Other reuse Graphical five-year trend
27	Sewer transport system performance (wet and dry weather surcharges)	<ul style="list-style-type: none"> Sewer surcharges (number and number/km main) Surcharges to private land (no. and proportion of customers affected) Repeat sewer surcharges to public land locations whether occurring in wet or dry weather (See Schedule 4, Section 1.4.5 of Operating Licence)
28	Trade waste incidents within the sewerage system	<ul style="list-style-type: none"> No. & five year trend representation
29	Odours	<ul style="list-style-type: none"> Treatment plant and transport system complaint nos. and trends

Appendix A Hunter Water's current environmental and ESD indicators

Environmental and ESD Indicator		Environmental and ESD Performance Measure
30	Chemical Collection	<ul style="list-style-type: none"> • Requests for collection from customers (number and per 100,000 households) • Requests for collection from catchment areas • Tonnage of waste collected • Graphical five-year trend representation and cumulative visits and tonnages
<i>Customers and Community</i>		
31	Customer survey perceptions	<ul style="list-style-type: none"> • Overall performance rating • Community acceptance of water supply standard • Community support for water conservation • Community acceptance of household sewage disposal service
32	Environmental Education	<ul style="list-style-type: none"> • This is a qualitative measurement of environmental education initiatives by Hunter Water
<i>Stormwater</i>		
33	Stormwater Environmental Improvement Program	<ul style="list-style-type: none"> • Progress against implementation of the program
<i>Corporate Responsibilities</i>		
34	Solid waste management	<ul style="list-style-type: none"> • Indicators included in "Waste Recycling and Purchasing Policy" • Quantity of waste to landfill by HWC and contractors • Proportion of office paper recycled • Proportion of construction waste recycled/reused
35	Environmental training	<ul style="list-style-type: none"> • Proportion of staff receiving refresher training in 3-year cycle • Proportion of new operations staff receiving environmental induction training
36	Noise	<ul style="list-style-type: none"> • No of breaches of Protection of the Environment Operations Act due to noise complaints • Number of validated noise complaints from the community due to Hunter Water activities
<i>Energy Management</i>		
37	Energy consumption in buildings	<ul style="list-style-type: none"> • Total kWh (10 year trend)
38	Energy efficiency of water and sewer services	<ul style="list-style-type: none"> • kWh per ML water and per ML sewage (10 year trend)
39	Generation of Greenhouse Gases	<ul style="list-style-type: none"> • Key Greenhouse gases to be measured in tonnes per annum due to electricity consumption
<i>Financial and Service Delivery</i>		
40	Costs	<ul style="list-style-type: none"> • total operating cost • cost per property • cost per ML of water delivered • cost per head of population

Independent Pricing and Regulatory Tribunal

Environmental and ESD Indicator			Environmental and ESD Performance Measure
41	Overall Delivery	Service	<ul style="list-style-type: none">• Number of people residing in HWC area of operations 10 year trend• Residential estimate from census• Residential estimate for areas served by treated water• Residential estimate for people connected to water and sewer• Residential estimate for sewerage areas of percentage of residential areas supplied with water
42	Price		<ul style="list-style-type: none">• Measured in \$ per KL of water supplied to customers

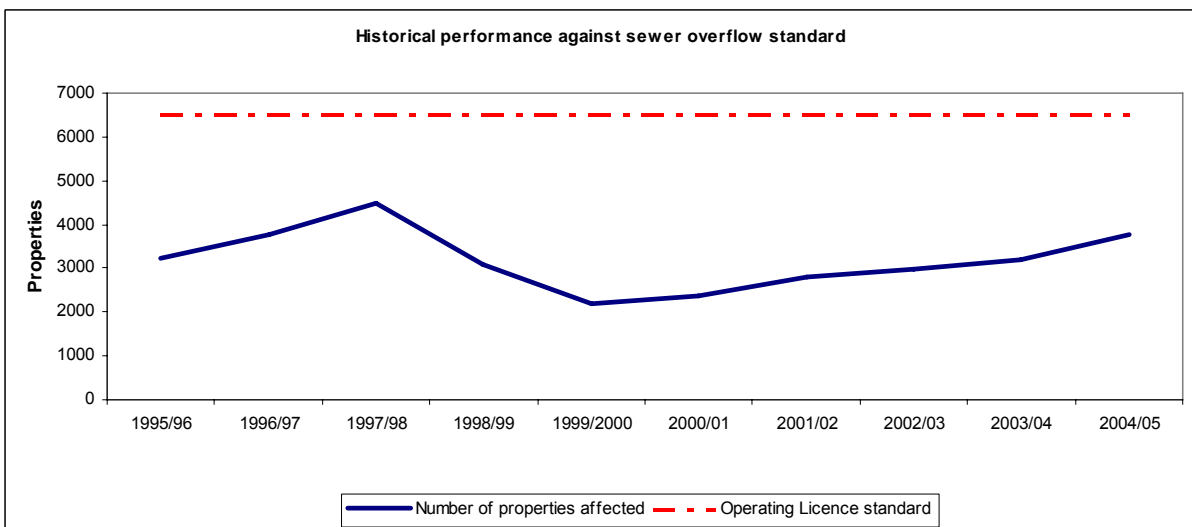
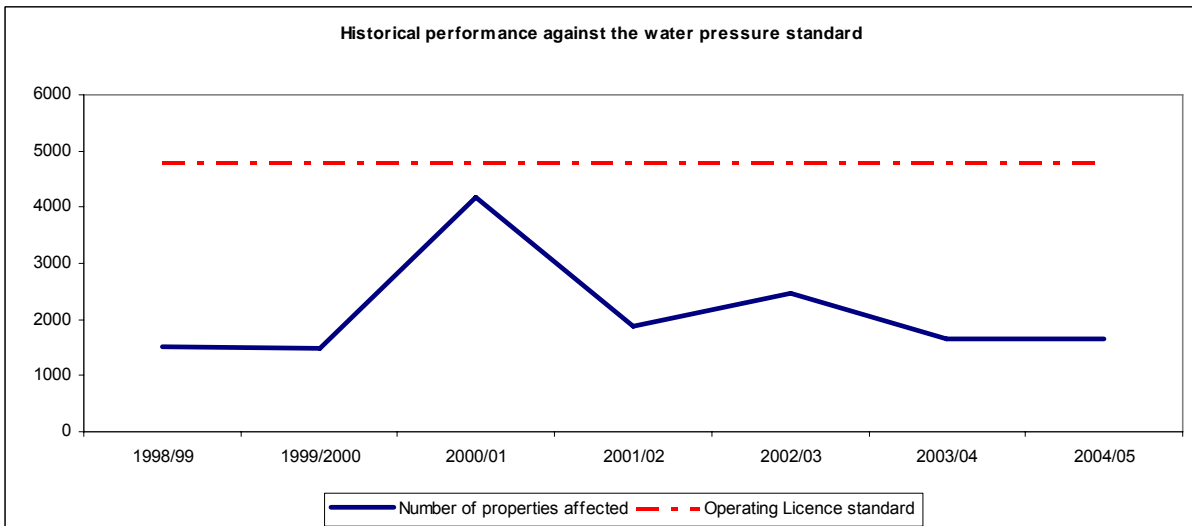
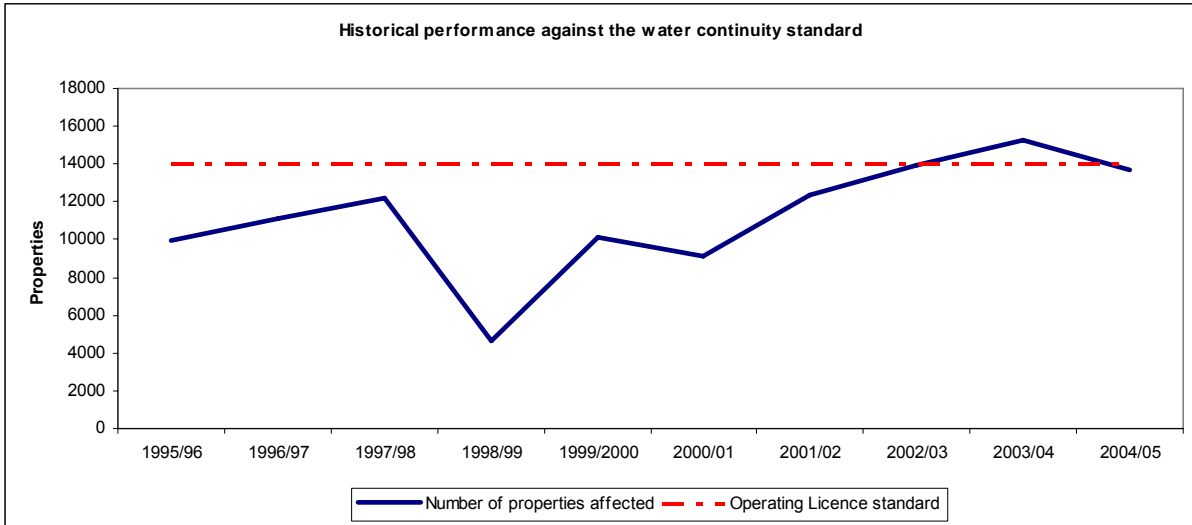
APPENDIX B SYDNEY WATER'S ENVIRONMENTAL PERFORMANCE INDICATORS

Environmental Performance Indicator		Environmental Performance Measure
<i>Water Conservation, reuse, recycling</i>		
1	Potable water drawn	<ul style="list-style-type: none"> Total volume of potable water drawn by Sydney Water from all sources. Potable water drawn expressed as a percentage of yield. Potable water drawn expressed on a per capita basis.
2	Demand management	<ul style="list-style-type: none"> Total volume of Drinking water demand saved on account of demand management programs (including savings due to water recycled and reduced unaccounted for water). Cumulative dollars expended on demand management versus cumulative demand saved.
3	Water leakage	<ul style="list-style-type: none"> Water leakage expressed as a percentage of potable water drawn.
4	Water recycled	<ul style="list-style-type: none"> Total volume of sewage effluent reused / recycled (report volumes on-site Sydney Water premises and off-site). Water recycled expressed as a percentage of total sewage effluent discharged. Cumulative dollars expended on water recycling versus cumulative water recycled.
<i>Water/effluent releases</i>		
5	Sewage effluent volume	<ul style="list-style-type: none"> The volume of sewage effluent discharged to the environment from inland sewage treatment plants and ocean sewage treatment plants
6	Sewage treatment plant (STP) effluent quality	<ul style="list-style-type: none"> Total mass of phosphorus discharged to streams / rivers from inland STPs. Total mass of nitrogen discharged to streams / rivers from inland STPs. Total mass of suspended solids discharged from ocean STPs. Total mass of grease discharged from ocean STPs. Suspended solids capture rate for inland STPs and ocean STPs.
7	Breaches of statutory instruments	<ul style="list-style-type: none"> Total number of breaches of conditions relating to environmental impacts under licences issued by DEC for the sewage treatment systems. Total number of breaches of conditions relating to environmental impacts under licences issued by DEC for the water treatment plants. Total number of prosecutions and Notices (including Penalty Notices) issued to Sydney Water under the <i>Protection of the Environment Operations Act 1997</i>. Total number of prosecutions and Notices (including Penalty Notices) under the <i>Protection of the Environment Operations Act 1997</i> issued to contractors engaged by Sydney Water.
8	Overflows from the Sewerage System	<ul style="list-style-type: none"> Total volume and total number of Controlled Sewage Overflows that occur in dry weather and in wet weather. Total volume of Controlled Sewage Overflows that occur in dry weather and in wet weather, expressed as a percentage of total sewage effluent discharged to the environment.
9	Stormwater	<ul style="list-style-type: none"> Total mass of silt and litter removed from Sydney Water's stormwater system in a financial year and the rainfall at Observatory Hill for the same period.
10	Recreational water quality	<ul style="list-style-type: none"> Percentage of time recreational water complied with the recreational water quality guidelines as reported by DEC's Beachwatch and Harbourwatch.

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Environmental Performance Indicator	Environmental Performance Measure
<i>Wastes and residuals</i>	
11 Biosolids	<ul style="list-style-type: none"> Total mass of biosolids produced by Sydney Water. Biosolids reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.
12 Water treatment residuals	<ul style="list-style-type: none"> Total mass of water treatment residuals produced by Sydney Water. Water treatment residuals reused (where the reuse delivers a net environmental benefit) expressed as a percentage of total mass produced.
13 Trade waste	<ul style="list-style-type: none"> Total mass of heavy metals received under trade waste agreements with Sydney Water.
14 Waste	<ul style="list-style-type: none"> Solid waste generated by Sydney Water. Waste recycled or reused expressed as a percentage of solid waste generated.
<i>Additional indicators</i>	
15 Greenhouse gases	<ul style="list-style-type: none"> CO₂ equivalent emissions through purchase of electricity, fuel and gas.
16 Electricity consumption	<ul style="list-style-type: none"> Total electricity consumed by Sydney Water. Total electricity consumption by water assets expressed as a function of water supplied (KWh/ML of water supplied). Total electricity consumption by sewer assets expressed as a function of sewage treated (KWh/ML of sewage treated). Electricity consumption from renewable sources or generated by Sydney Water expressed as a percentage of total electricity consumption.
17 Contaminated land	<ul style="list-style-type: none"> Number of sites under the control of Sydney Water that present a significant risk of harm as defined under <i>the Contaminated Land Management Act 1997</i>.
18 Heritage	<ul style="list-style-type: none"> The number of State heritage listed sites with Conservation Management Plans prepared as a proportion of the number of State heritage listed sites without Conservation Management Plans prepared. Number of impact permits granted in relation to Aboriginal cultural heritage under the <i>National Parks and Wildlife Act</i>.
19 Flora and Fauna	<ul style="list-style-type: none"> Total area of clearing of native vegetation. Total area of native vegetation gain due to site rehabilitation, restoration or replanting by Sydney Water.
20 Odour	<ul style="list-style-type: none"> Total number of odour complaints generated from the sewage treatment plants or the sewerage system.
21 Noise	<ul style="list-style-type: none"> Total number of noise complaints generated from Sydney Water's construction or operational activities.

APPENDIX C HUNTER WATER'S RECENT SYSTEM PERFORMANCE RESULTS



APPENDIX D SYDNEY WATER'S ASSET MANAGEMENT OBLIGATIONS

4.8 Asset management obligation

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

- (a) the terms and conditions in this Licence, and its obligations under the Customer Contract and all applicable laws with which Sydney Water must comply;
- (b) subject to (a) above, the lowest life cycle cost and acceptable risk of the Assets;
- (c) the whole of life of the Assets; and
- (d) its assessment of the risk of loss of the Assets, and capacity to respond to a potential failure or reduced performance of the Assets.

4.9 Reporting on the asset management system

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

4.9.2 The report must include the following matters:

- (a) a description of the processes, practices, systems and plans Sydney Water uses in managing the Assets;
- (b) a description of each group of Assets;
- (c) an assessment of the expected capability of the Assets to deliver the Services and meet the existing obligations consistent with this Licence, the Customer Contract and all applicable laws with which Sydney Water must comply;
- (d) an assessment of the major issues or constraints on current and future performance of the Assets;
- (e) the strategies and expected costs of future investment in Assets;
- (f) progress in implementing the management of Sydney Water's Assets and any recommended improvements in processes, practices, systems and plans for the management of the Assets; and
- (g) such other matters reasonably required by IPART.

4.10 Auditing the asset management system

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

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

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

- (b) investigating compliance by Sydney Water with specific areas of its Asset management.
- 4.10.3 An audit undertaken under clause 4.10.1 or 4.10.2, must comply with the scope and audit specifications determined by IPART.
- 4.10.4 The provisions of clause 12 apply to an audit under clause 4.10 as if the audit under clause 4.10 is an Annual audit.
- 4.10.5 The Minister must be advised of any such decision to audit and, subsequent to the audit, be provided with a report on the outcomes of the audit.

APPENDIX E SYDNEY WATER'S CUSTOMER SERVICE INDICATORS

Customer Service Indicator	Customer Service Measure
1 Complaints	<ul style="list-style-type: none"> Total number and the number per 1000 Properties of complaints received by Sydney Water
2 Water supply reliability complaints	<ul style="list-style-type: none"> The total number and number per 1000 Properties of complaints received by Sydney Water relating to burst water mains, leaks, and service interruptions.
3 Sewerage service quality and reliability complaints	<ul style="list-style-type: none"> Total number and number per 1000 Properties of complaints received by Sydney Water relating to sewer blockages, overflows, spills and sewerage system interruptions. The total number and number per 1000 Properties of complaints received by Sydney Water relating to sewage odour.
4 Stormwater and Drainage Complaints	<ul style="list-style-type: none"> Total number and number per 1000 Properties of complaints received by Sydney Water relating to stormwater and drainage services. Total number and the number per 1000 Properties of complaints relating to above ground flooding from stormwater and drainage services.
5 Billing Complaints	<ul style="list-style-type: none"> Total number and number per 1000 Properties of complaints relating to account payments, financial loss, billing errors or overcharging,
6 Affordability contacts	<ul style="list-style-type: none"> Total number and number per 1000 Properties of contacts received by Sydney Water that are requests for instalment or deferred payment plans.
7 Other complaints	<ul style="list-style-type: none"> Total number and number per 1000 Properties of complaints received by Sydney Water other than those to which Indicators 2-7 apply.
8 Customer Complaint Resolution	<ul style="list-style-type: none"> The percentage of complaints received by Sydney Water that are resolved: <ul style="list-style-type: none"> within 2 days within 5 days within 10 days
9 Telephone calls to a primary contact number	<ul style="list-style-type: none"> Percentage of telephone calls received by a permanent primary advertised number of Sydney Water that are answered: <ul style="list-style-type: none"> within 15 seconds within 30 seconds
10 Metered accounts where meter not read	<ul style="list-style-type: none"> Percentage of metered accounts of Customers that receive a bill not based on: <ul style="list-style-type: none"> An actual meter read during the year A business meter read for two consecutive years
11 Customer contacts	<ul style="list-style-type: none"> The average time taken for a caller to Sydney Water to be connected to an operator.
12 Instalment Plans	<ul style="list-style-type: none"> The total number and number per 1000 Properties of continuing instalment plans for two or more consecutive quarters (classified by residential and non-residential Customers).
13 Flow Restrictions	<ul style="list-style-type: none"> The total number and number per 1000 Properties having water flow restricted for non payment (classified by residential and non residential Customers), and the average amount owed to Sydney Water by Customers subject to water flow restriction (classified by residential and non-residential Customers).
14 Legal Actions	<ul style="list-style-type: none"> The total number and number per 1000 Properties on which legal action for non payment of account is taken (classified by residential and non residential Customers), and the average amounts owed to Sydney Water by Customers subject to legal action (classified by residential and non residential Customers).

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Customer Service Indicator	Customer Service Measure
15 Disconnections	<ul style="list-style-type: none">The total number and number per 1000 Properties of Customers disconnected for non payment of amounts owed to Sydney Water (classified by residential and non residential Customers).
16 Water Flow Restriction Duration	<ul style="list-style-type: none">The average number of days for which water flow restrictions are applied to Customers and the percentage of water flow restrictions restored within 3 days and the percentage of water flow restrictions still in place after 14 days.
17 Flexipay Cards	<ul style="list-style-type: none">Number of Flexipay cards issued.
18 Payment Assistance Vouchers	<ul style="list-style-type: none">Number and value of payment assistance vouchers utilised.
19 Customer Contract Rebates	<ul style="list-style-type: none">The number and value of rebates paid pursuant to a Customer Contract in the categories in clause 7.2 of the Customer Contract.