



Independent Pricing and Regulatory Tribunal

Review of the Operating Licence for Sydney Water Corporation

Water Licensing — Issues Paper
June 2014



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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 30 July 2014 (for Sydney Water Corporation), and 20 August 2014 (for other stakeholders).

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

Review of the Operating Licence for Sydney Water Corporation
Independent Pricing and Regulatory Tribunal
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Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au> as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be disclosed under the *Government Information (Public Access) Act 2009* or the *Independent Pricing and Regulatory Tribunal Act 1992*, or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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1 Introduction

The Independent Pricing and Regulatory Tribunal (IPART) is conducting an end of term review of Sydney Water Corporation's (Sydney Water) operating licence.¹

We last reviewed Sydney Water's operating licence in 2010.² The current Sydney Water operating licence:

- ▼ expires on 30 June 2015
- ▼ may be renewed for a maximum period of 5 years.³

Previously, IPART has recommended that an operating licence be granted for the full 5-year period. On this basis, Sydney Water's new operating licence is likely to operate during the period 1 July 2015 to 30 June 2020.

The current operating licence combines obligations imposed on Sydney Water by specific provisions of the *Sydney Water Act 1994* (the Act) and requirements prescribed by other legislation relevant to the administration of operating licences generally.⁴

1.1 The purpose of the review

The primary purpose of the end of term review is to determine whether the operating licence is fulfilling its function and to recommend to the Minister for Natural Resources, Lands and Water (the Minister) conditions to be included in Sydney Water's new operating licence.

¹ The Sydney Water operating licence is granted under Part 5 of the *Sydney Water Act 1994*.

² Sydney Water Operating Licence 2010-2015.

³ As allowed by s 17 of the *Sydney Water Act 1994*.

⁴ For example, some provisions of the *Independent Pricing and Regulatory Tribunal Act 1992* and *State Owned Corporations Act 1989*.

1.2 The scope of the review

Sydney Water's current operating licence requires that a review be undertaken:

- ▼ to determine if the licence is fulfilling its objectives
- ▼ in relation to any matters required to be reviewed by the licence⁵
- ▼ to determine the terms and conditions of any renewal of the licence.⁶

The purpose of this paper is to identify and assist in the discussion of key issues for the review. Where possible, we outline our preliminary views or positions. We welcome stakeholder feedback on these views, alternative options and all other relevant issues.

1.3 The role of the operating licence

Statutory licence requirements

The current operating licence sets out the terms and conditions under which Sydney Water is to carry out its functions. The Act specifies that the operating licence must include terms and conditions under which Sydney Water is required to:

- ▼ provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems and services for supplying water, providing sewerage services and disposing of wastewater
- ▼ provide, operate, manage and maintain a stormwater drainage system
- ▼ ensure that the systems and services meet the quality and performance standards specified in the operating licence in relation to water quality, service interruptions, pricing and other matters determined by the NSW Governor and set out in the licence
- ▼ compile indicators of the direct impact on the environment of Sydney Water's activities:
 - to enable preparation of an annual report on Sydney Water's performance
 - to provide information for a year to year comparison in relation to Sydney Water's performance in this area⁷
- ▼ establish and regularly consult with one or more Customer Councils, each consisting of persons appointed from time to time by Sydney Water.⁸

⁵ No additional matters have been identified for the current review.

⁶ Sydney Water Operating Licence 2010-2015, cl 12(a).

⁷ *Sydney Water Act 1994*, s 14(1).

⁸ *Sydney Water Act 1994*, s15(1).

Under the Act, Sydney Water's operating licence should also provide for the preparation of an operational audit⁹ and set out the terms and conditions of the customer contracts.¹⁰

The role or purpose of the operating licence

We consider the primary role of the operating licence is to ensure that Sydney Water provides an adequate level of service to its customers, given that it is a monopoly provider of an essential service. This is consistent with the requirements of the operating licence under the Act, as outlined above.

Many provisions in the operating licence would not be required if Sydney Water were operating in a competitive market. In this sense, the operating licence is aimed at replicating the pressures of a competitive market in regulating Sydney Water's performance.

In considering the role of the operating licence, and potential licence requirements, it is also important to be mindful that many of the potential environmental and health impacts of Sydney Water are regulated by other instruments (see Chapter 2). In recommending the terms of the operating licence, we are seeking to avoid regulatory duplication.

1.4 Our approach to the review

In reviewing Sydney Water's operating licence, we will consider whether to maintain or amend the terms of the current licence to improve Sydney Water's operational efficiency and regulation.

We will draw on best practice regulatory principles, including those outlined in our recent Draft Report on *Reforming licensing in NSW – Review of licence rationale and design* and our associated Licensing Framework (*A best practice approach to designing and reviewing licensing schemes*). This framework includes:

- ▼ considering whether government action is required to address a specific problem or risk and, if so, whether licensing is appropriate
- ▼ assessing whether the licence is well designed – taking into account how its objectives relate to its coverage, duration, reporting requirements, fees and charges, conduct rules and mandatory attributes
- ▼ assessing whether the licence is administered effectively and efficiently
- ▼ confirming that licensing is the best response when comparing its costs and benefits against other options.¹¹

⁹ *Sydney Water Act 1994*, s 14(2).

¹⁰ *Sydney Water Act 1994*, s 54(1).

¹¹ IPART, *Reforming licensing in NSW – Review of licence rationale and design*, Draft Report, October 2013, p 42.

The discussion and specific questions within the Issues Paper were informed by this framework. Further, information provided through submissions to this Issues Paper, Sydney Water's past performance, the findings of annual operating audits of the licence and the costs and benefits of the proposed changes will be used to assess the final design of the licence in accordance with the framework.

1.5 Review process and timing

Table 1.1 below presents the indicative timetable for this review. Details on how to make a submission can be found at the front of this Issues Paper.

Table 1.1 Timetable for the review

Key tasks	Date
Release Issues Paper and invite submissions	16 June 2014
Sydney Water's submission due	30 July 2014
Other stakeholder submissions due	20 August 2014
Release draft operating licence, reporting manual and cost benefit analysis	February 2015
Public workshop on draft package	March 2015
Release final recommendations to Government	May 2015

We invite all interested parties, including members of the public, to provide a submission on issues highlighted in this paper and any other matters related to the operating licence.

We will seek a submission from Sydney Water, which outlines its proposed licence provisions (or any changes to existing provisions) and the justification for its proposal.

We request that Sydney Water provide its submission to us by 30 July 2014. Other interested parties are invited to make a submission by 20 August 2014. The different closing dates will allow other stakeholders to consider Sydney Water's views in formulating their own submissions.

Submissions will be published on our website after the close of submissions. However, we may not accept late submissions.

After receiving and considering submissions in response to this Issues Paper, we will then develop a draft licensing package. This will include the following:

- ▼ a draft operating licence
- ▼ a draft reporting manual (this document is linked to the licence and outlines all Sydney Water's reporting obligations in respect to licence conditions)
- ▼ a draft cost benefit analysis (CBA) document.

We are mindful of the potential regulatory cost associated with changes to the operating licence, which will ultimately be passed onto Sydney Water's customers. To address these concerns, we will undertake a CBA of any proposed changes to the existing licence.

Following the public release of the draft licensing package, we will hold a public workshop to provide an opportunity for interested parties to discuss the proposed changes to the licence.¹² The workshop will be held prior to the closing date for submissions on the draft licensing package.

Finally, we will conduct targeted consultation with major stakeholders and finalise our recommendations to the Minister in May 2015. This will allow sufficient time for the NSW Governor to grant a new operating licence effective from 1 July 2015.

1.6 The structure of the Issues Paper

To assist interested parties in making submissions, this paper explains how the licence review will be undertaken, provides relevant background information, outlines the current licence requirements, and identifies key issues for stakeholder consideration and response.

The remainder of this Issues Paper is structured as follows:

- ▼ Chapter 2 provides context for this review, including Sydney Water's regulatory framework
- ▼ Chapters 3 to 8 consider licence obligations, by key performance area (customers, environment, water quality, assets) – including current licence requirements and potential changes to these requirements.

1.7 List of issues for stakeholder comment

To assist in identifying and understanding the key issues for this review, we seek comment on the issues, which are explained and discussed throughout this paper (the page numbers are listed below). These issues are grouped according to the relevant section of the Issues Paper. The issues should be considered in response to Sydney Water's submission, which will be published on our website soon after its submission date on 30 July 2014.

Stakeholders are also welcome to raise and comment on any other issues they consider relevant to this review.

¹² Please note that details regarding the release of the draft licensing package and the workshop will be published closer to the date of release.

Water Quality

- 1 Should the operating licence obligations for drinking water be retained, given the presence of similar requirements under the *Public Health Act 2010*? 21
- 2 If the licence obligation for drinking water is retained, should it be subject to the Chief Health Officer granting an exemption from requiring a quality assurance program under the *Public Health Act 2010*? 21
- 3 Given the requirements of the *Fluoridation of Public Water Supplies Act 1957*, the *Fluoridation of Public Water Supplies Regulation 2012* and the *New South Wales Code of Practice for Fluoridation of Public Water Supplies 2011*, should fluoridation requirements in the operating licence be removed? 22
- 4 Should the operating licence's water quality obligations for drinking water and recycled water be changed to require Sydney Water to maintain a Water Quality Management System that is consistent with the *Australian Drinking Water Guidelines* and *Australian Guidelines for Water Recycling*? 23
- 5 Should the operating licence's obligation to produce a 5-year Drinking Water Quality Management Plan be removed? 24
- 6 Should the operating licence's reporting requirements be changed to utilise the output of the Water Quality Management System? 24
- 7 Are there any other obligations that should be included in the operating licence to address the risks associated with drinking water or recycled water quality? 24

Infrastructure

- 8 Should Sydney Water's operating licence move to a systems standard approach for asset management, as has occurred for other public water utilities? 30
- 9 Is ISO 55001:2014 the most appropriate asset management Standard or is there another standard that we should consider? 30
- 10 Should the operating licence require the Asset Management System to be certified to ISO 55001:2014 or simply be consistent with this Standard? 30
- 11 What should be the required timeframe for developing and/or certifying the Asset Management System? 30
- 12 What are the costs and benefits of moving to a certified system? 30
- 13 Should the biennial 'State of the Assets reporting' continue in its current form with the content and format prescribed by IPART in the Reporting Manual or

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15 What would be the impact of removing the word 'uncontrolled' from the definition in the licence of sewerage overflows? Should any sewerage overflow affecting private property be counted?	40
16 Do the current system performance standards (measures and levels) align with customer expectations and preferences or should we consider changing or adding to these standards?	40
17 Should Sydney Water notify IPART of significant asset failures (such as a priority 6 break/leak) within a specified timeframe after any incident?	41
18 What are the costs and benefits of achieving the main break/leak response time targets?	41
19 Are the mains break/leak response time requirements still appropriate and reflective of community expectations and customer willingness to pay?	41
20 Should the new operating licence contain any obligations for the Priority Sewerage Program (eg, what, if any, requirements should be included in relation to the outstanding Priority Sewerage Program areas of Yanderra, Austral, Menangle and Menangle Park)?	43
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25 Should the operating licence contain any additional obligations relating to leakage in addition to those we have identified?	50

- 26 Should the operating licence require Sydney Water to develop a protocol with the Metropolitan Water Directorate, which outlines Sydney Water's roles and responsibilities in developing and implementing the Metropolitan Water Plan? If so, what constraints or parameters should be put around this requirement? 53
- 27 What are your views on our preliminary position in regard to water conservation requirements in the operating licence? 56
- 28 What water conservation requirements should be included in the new operating licence? 56

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- 29 Should we continue to require Sydney Water to maintain an Environmental Management System certified to AS/NZS ISO 14001:2004? 64
- 30 As Sydney water is required to implement an Environmental Management System, is there any additional benefit in producing a 5-year Environmental Management Plan? 65
- 31 Are there any other environmental obligations we should include in the operating licence? 65

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- 32 Is Sydney Water's customer contract easy to comprehend and can it be enhanced in any way? 71
- 33 Would it be beneficial to amend the *Sydney Water Act 1994* to eliminate the difficulties associated with varying the customer contract? Further, what should be done in the interim? 72
- 34 Are the current hardship provisions in the operating licence and customer contract sufficient? 73
- 35 Is Sydney Water's Customer Council working effectively and how could its membership and community involvement be further improved? 73
- 36 Are there any other licence obligations that should be included in the operating licence or customer contract to further enhance customer protection provisions? 73

Other areas for consideration

- | | | |
|----|--|----|
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| 38 | Should the Memorandum of understanding requirements with the NSW Office of Water and the Environment Protection Authority be removed from the operating licence? | 76 |
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| 40 | If the Quality Management System requirement is included in the operating licence, what is a reasonable timeframe for implementation? | 77 |
| 41 | If the Quality Management System requirement is included in the operating licence, should it be required to be certified? If so, what is a reasonable time period for certification? | 77 |
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| 45 | Are there any licence obligations that may hinder or enhance third party access to Sydney Water's monopoly infrastructure services? | 78 |
| 46 | How can the operating licence be amended to enhance links with IPART's pricing function? | 79 |
| 47 | Can the operating licence be amended to provide added incentives to Sydney Water to pursue efficiency gains? | 79 |

2 Context for the review

Sydney Water is Australia's largest water utility, servicing a population of 4.7 million people. It is a statutory State Owned Corporation (SOC), wholly owned by the NSW State Government. Within its area of operations, covering the Sydney, Illawarra and Blue Mountains regions, it is responsible for the treatment and distribution of drinking water and sewerage services. Sydney Water also provides stormwater and drainage services and recycled water to some areas of Sydney.¹³

Sydney Water does not manage bulk water supply or catchments. It sources its water from the Sydney Catchment Authority and, when required, the Sydney Desalination Plant.¹⁴

Sydney Water's roles, responsibilities and objectives are prescribed by the *State Owned Corporations Act 1989*, the *Sydney Water Act 1994* and the operating licence.

IPART regulates Sydney Water's compliance with its operating licence and sets the maximum prices it may charge for its monopoly services.

This chapter sets out the context of the review and describes Sydney Water's role and its regulatory framework.

2.1 Sydney Water's role

Sydney Water is a statutory SOC, wholly owned by the NSW Government. Its primary role is to provide and manage water and sewerage services, dispose of wastewater and provide stormwater drainage systems within its area of operations.

Sydney Water's principal objectives are prescribed by the *State Owned Corporations Act 1989*¹⁵ (which sets out the principle objectives of every SOC) and the Act.¹⁶

¹³ Sydney Water, *Annual Report 2013*, p 6.

¹⁴ Sydney Water, *Annual Report 2013*, pp 99 and 106.

¹⁵ *State Owned Corporations Act 1989*, s 20E.

¹⁶ *Sydney Water Act 1994*, s 21.

Sydney Water's statutorily prescribed principle objectives are:

- ▼ to be a successful business and, to this end:
 - to operate at least as efficiently as any comparable businesses, and
 - to maximise the net worth of the State's investment in Sydney Water, and
 - to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates, and
- ▼ to protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development, and
- ▼ to protect public health by supplying safe drinking water to its customers and other members of the public in compliance with the requirements of any operating licence.¹⁷

In implementing the principal objectives set out above, Sydney Water has the special objectives:

- ▼ to reduce risks to human health, and
- ▼ to prevent the degradation of the environment.¹⁸

The Act provides that the NSW Governor may grant one or more operating licences to enable Sydney Water, in its area of operations, to provide, construct, operate, manage or maintain systems or services for:

- ▼ storing or supplying water, or
- ▼ providing sewerage services, or
- ▼ providing stormwater drainage systems, or
- ▼ disposing of waste water.¹⁹

2.2 Sydney Water's regulatory framework

Sydney Water is subject to a number of Acts, Regulations and government policies. The operating licence is just one component of this framework. In this section we focus on Sydney Water's broader regulatory framework. The operating licence and the requirements of the Act are discussed in detail in subsequent chapters of this paper.

Understanding Sydney Water's broader regulatory framework is important in identifying potential areas of:

- ▼ regulatory duplication – where we may not need to address a particular issue via the licence

¹⁷ *Sydney Water Act 1994*, s 21(1).

¹⁸ *Sydney Water Act 1994*, s 22(1).

¹⁹ *Sydney Water Act 1994*, s 12(1).

- ▼ regulatory gaps – where we may need to address a particular issue via the licence.

A brief summary of Sydney Water’s main regulatory requirements is described below.

2.2.1 Corporate Governance

As a SOC, Sydney Water operates as an autonomous company, only taking direction from the portfolio minister. Sydney Water’s portfolio minister is the Minister for Natural Resources, Lands and Water. Its shareholding ministers are the Minister for Finance and Services and the Treasurer. Sydney Water pays dividends to the Government.

The Minister may:

- ▼ direct a SOC (including Sydney Water) to carry out activities, that are not in its commercial interest²⁰
- ▼ require a SOC (including Sydney Water) to comply with public sector policies²¹
- ▼ provide a direction to the board of a SOC (including Sydney Water) if the portfolio minister is satisfied that, because of exceptional circumstances, it is necessary to give the direction in the public interest.²²

There are 2 different ways in which Sydney Water can recover the costs of complying with a Ministerial Direction:

- ▼ The Minister can direct IPART to pass through the efficient costs of complying with the requirement to customers when determining the prices Sydney Water can charge.²³
- ▼ Sydney Water can be reimbursed from money advanced from the Treasurer or appropriated by Parliament.²⁴

2.2.2 Protection of the Environment

There are 2 key pieces of legislation to regulate Sydney Water’s impact on the environment:

- ▼ *Environmental Planning and Assessment Act 1979* (EP&A Act): outlines the environmental assessment and approval processes Sydney Water must follow to undertake any development

²⁰ *State Owned Corporations Act 1989*, s 20N.

²¹ *State Owned Corporations Act 1989*, s 20O.

²² *State Owned Corporations Act 1989*, s 20P.

²³ *Independent Pricing and Regulatory Tribunal Act 1992*, s 16A.

²⁴ *State Owned Corporations Act 1989*, s 20N(3), 20O(4) and 20P(4).

- ▼ *Protection of the Environment Operations Act 1997* (POEO Act): prohibits individuals, corporations and statutory authorities (including Sydney Water) from polluting the environment unless authorised to do so by an Environment Protection Licence (EPL).

The sections below give an overview of Sydney Water’s requirements under these Acts.

Environment Planning and Assessment Act

Sydney Water must generally obtain approval to construct, unless an exemption applies. Development approval is generally granted by the local council or the Minister for Planning (in the case of State significant development). Part 4 of the EP&A Act outlines the approval process the consent authority must follow, including environmental factors it must consider.

There are a number of Sydney Water’s activities that do not require development consent under Part 4 of the EP&A Act due to the operation of the *State Environmental Planning Policy (Infrastructure) 2007*. For example, Sydney Water may carry out development for the following purposes without consent under Part 4 of the EP&A Act:

- ▼ sewage treatment plants, biosolids treatment facilities or water recycling facilities on land in a prescribed zone
- ▼ sewage reticulation on any land
- ▼ water storage facilities on land in certain land use zones
- ▼ water treatment facilities on land in certain land use zones
- ▼ water reticulation on any land.²⁵

For the development described above, Sydney Water is a determining authority under Part 5 of the EP&A Act, as a public authority that is a proponent of an activity.²⁶ Part 5 of the EP&A Act prescribes the environmental assessment Sydney Water must complete before carrying out an activity, which includes a requirement to “examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity”.²⁷

²⁵ *State Environmental Planning Policy (Infrastructure) 2007*, Division 18 and Division 24.

²⁶ *Environment Planning and Assessment Act 1979*, s 110.

²⁷ *Environment Planning and Assessment Act 1979*, s 111(1).

Protection of the Environment Operations Act

In general terms, the POEO Act prohibits individuals, corporations and statutory authorities (including Sydney Water) from polluting the environment unless authorised to do so by an EPL. The Environment Protection Authority (EPA) administers and is the compliance regulator for the POEO Act.²⁸ The EPA has the authority to issue environment protection notices (such as clean-up notices) and impose penalties for offences defined in the POEO Act.²⁹

Sydney Water is required to have an EPL for any ‘scheduled activities’ and any activities that pollute water.³⁰ The operation of sewage treatment systems (that involve the discharge or likely discharge of wastes or by-products to land or waters) is a scheduled activity if the processing capacity exceeds 2,500 persons equivalent or 750 kilolitres per day.³¹ The majority of Sydney Water’s sewage treatment systems have an EPL, and their operation is directly regulated by the EPA.

2.2.3 Water resource management

The NSW Office of Water (NOW) is responsible for the administration of the *Water Management Act 2000*, which regulates the extraction of water from rivers and dams and the construction of works for water supply, drainage and flood management.

The *Water Sharing Plan for the Greater Metropolitan Region Unregulated Water Sources 2011* (Water Sharing Plan) required Sydney Water to replace its Water Management Licence granted under the *Water Act 1912* with a Water Access Licence granted under the *Water Management Act 2000*.³² A Water Access Licence determines the amount of water and the flow conditions under which Sydney Water can extract water for drinking water use.³³ One of the purposes of the Water Sharing Plan is to protect the environmental health of the water source.

Further, while not a regulatory instrument, the NSW Government’s approach to water planning is outlined in the Metropolitan Water Plan. This plan identifies a range of water supply and conservation measures, and is aimed at ensuring that Sydney’s water demand and supply are in balance over the medium to long-term. As the primary water utility in the region, Sydney Water is a major contributor to meeting the strategies outlined in this document. The Metropolitan Water Plan and its relationship with Sydney Water are discussed further in Chapter 5.

²⁸ *Protection of the Environment Operations Act 1997*, s 6(1).

²⁹ *Protection of the Environment Operations Act 1997*, Part 4 and 5.

³⁰ *Protection of the Environment Operations Act 1997*, s 43.

³¹ *Protection of the Environment Operations Act 1997*, Schedule 1, cl 1.

³² *Water Management Act 2000*, s 56.

³³ *Water Management Act 2000*, s 56(1) and (2).

2.2.4 Public health

As a supplier of drinking water, Sydney Water is required to comply with the *Public Health Act 2010*³⁴ and the *Public Health Regulation 2012*.³⁵ This includes establishing a quality assurance program,³⁶ which addresses elements of the Australian Drinking Water Guidelines (ADWG) and can be reviewed at any time.³⁷

Under the *Public Health Act 2010*, the Chief Health Officer can determine whether or not it should issue a boil water notice.³⁸ Sydney Water can also be directed, by the Director-General, to test drinking water and be required to provide information on the quality of the water supplied.³⁹

Sydney Water is also required to comply with the *Fluoridation of Public Water Supplies Act 1957* and the *Fluoridation of Public Water Supplies Regulation 2012*, which outlines the requirements for water suppliers to implement the *NSW Code of Practice for Fluoridation of Public Water Supplies 2011* (Fluoridation Code). The Fluoridation Code is prepared by NSW Health and applies to all new and existing water treatment plants in NSW. Sydney Water is responsible for ensuring that it complies with the Fluoridation Code.

The Fluoridation Code outlines monitoring, reporting and auditing requirements. Fluoridation monitoring results are reported to NSW Health, which is responsible for confirming monitoring results and following up with any non-compliances.⁴⁰ NSW Health also provides training for plant operators and NOW provides technical advice on treatment plant operations.⁴¹ The Fluoridation Code also allows NSW Health to carry out independent audits of Sydney Water's compliance.⁴²

These regulatory instruments provide a comprehensive framework for the fluoridation of water supplies, including reporting and compliance requirements.

³⁴ *Public Health Act 2010*, part 3.

³⁵ *Public Health Regulation 2012*, part 5, Division 1.

³⁶ *Public Health Act 2010*, s 25(1).

³⁷ *Public Health Regulation 2012*, cl 34.

³⁸ *Public Health Act 2010*, s 21.

³⁹ *Public Health Act 2010*, s 18 and 19.

⁴⁰ Centre for Oral Health, *New South Wales Code of Practice for Fluoridation of Public Water Supplies*, April 2011, p 35.

⁴¹ Centre for Oral Health, *New South Wales Code of Practice for Fluoridation of Public Water Supplies*, April 2011, p 38.

⁴² Centre for Oral Health, *New South Wales Code of Practice for Fluoridation of Public Water Supplies*, April 2011, p 40.

2.2.5 Price regulation

IPART is responsible for regulating Sydney Water's prices, under the *Independent Pricing and Regulatory Tribunal Act 1992*.⁴³ The rationale for IPART's price regulatory role is similar to the rationale underpinning Sydney Water's operating licence – ie, the need to protect consumers from the potential adverse impacts of monopoly power and to replicate the pressures of a competitive market on Sydney Water's performance.

IPART sets the maximum prices Sydney Water can charge its customers for its water, sewerage, stormwater and miscellaneous services, and for some mandatory recycled water services.⁴⁴ IPART has developed pricing guidelines for other recycled water services.⁴⁵

IPART sets prices to only allow Sydney Water to recover its prudent and efficient costs of service delivery. Prices are usually set for a 4-year determination period.

Importantly, in setting Sydney Water's maximum prices, IPART allows for its efficient costs of complying with regulatory requirements – including requirements of the EPA, NSW Health and its operating licence.

That is, the operating licence can potentially affect Sydney Water's costs, and hence the prices consumers pay for its services. It also further demonstrates the importance of only including requirements in the operating licence that are necessary, achieve targeted outcomes at least cost, and result in a net economic benefit to society.

2.2.6 Other consumer protection legislation

It is important to note that in addition to the requirements of its operating licence, the Australian Consumer Law as set out in Schedule 2 of the *Competition and Consumer Act 2010* (Cth) applies to Sydney Water. The Australian Consumer Law is a national consumer protection law.

⁴³ *Independent Pricing and Regulatory Tribunal Act 1992*, s 11.

⁴⁴ *Independent Pricing and Regulatory Tribunal Act 1992*, s 11.

⁴⁵ IPART, *Pricing arrangements from recycled water and sewer mining*. Sydney Water Corporation, Hunter Water Corporation and Wyong Shire Council, September 2006.

3 | Water quality

In this chapter we discuss the obligations in the operating licence that address water quality. The quality of drinking water and recycled water supplied by Sydney Water can have a significant impact on public health and the environment.

In doing so, we:

- ▼ present the current water quality obligations in the operating licence, including their rationale and Sydney Water’s performance against these provisions
- ▼ discuss the need for the obligations in light of the broader regulatory environment related to the supply of drinking water and recycled water
- ▼ discuss potential alternative obligations
- ▼ present our preliminary views on potential water quality provisions in Sydney Water’s new operating licence.

3.1 What are the current water quality operating licence obligations?

Water quality obligations in the operating licence relate to drinking water and recycled water. They are aimed at protecting public health.

3.1.1 Drinking water

The obligations regarding drinking water include the requirement for Sydney Water:

- ▼ to manage drinking water in accordance with the Australian Drinking Water Guidelines (ADWG)⁴⁶
- ▼ develop a 5-year Drinking Water Quality Management Plan (DWQMP) outlining strategies for the comprehensive management of the quality of drinking water

⁴⁶ National Health and Medical Research Council, *Australian Drinking Water Guidelines*, December 2013.

- ▼ implement procedures and processes for the appropriate management of the drinking water supply system, taking into account planning and risk management and their implementation across the entire drinking water supply system
- ▼ comply with the fluoridation plant operating targets set out in the Fluoridation Code
- ▼ report on drinking water quality monitoring as outlined in the Reporting Manual.⁴⁷

3.1.2 Recycled water

The obligations regarding recycled water quality include the requirements for Sydney Water:

- ▼ to manage recycled water quality in accordance with the Australian Guidelines for Water Recycling (AGWR)⁴⁸
- ▼ report on recycled water quality monitoring in the manner and form outlined in the Reporting Manual.⁴⁹

3.1.3 How has Sydney Water performed?

Sydney Water provides high quality drinking water and recycled water, which meet the respective water quality requirements of the ADWG and AGWR. This is demonstrated by:

- ▼ water quality and customer performance indicators⁵⁰
- ▼ monitoring results provided to NSW Health and posted on Sydney Water's website
- ▼ results of IPART's annual compliance audits.

Sydney Water has achieved 100% compliance for water quality monitoring results and high to full compliance for water quality clauses during the annual audits of the operating licence. In the last 3 years, Sydney Water has received high or full compliance for drinking water quality and recycled water quality. The recommendations that have been made during the annual compliance audits have related to strengthening processes to manage water quality, rather than concerns with the quality of water.

⁴⁷ Sydney Water Operating Licence 2010-2015, cl 2.1.

⁴⁸ National Health and Medical Research Council, Environment Protection and Heritage Council, Australian Health Ministers Conference, *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)*, November 2006.

⁴⁹ Sydney Water Operating Licence 2010-2015, cl 2.2.

⁵⁰ See Appendix E for a full list of IPART performance indicators.

3.2 Our preliminary views on water quality obligations in the new operating licence

To determine what obligations should be in the licence, we need to consider:

- ▼ the objectives of including water quality obligations in the operating licence
- ▼ whether the operating licence is the best mechanism to achieve these objectives
- ▼ if so, the obligations that should be included in the new operating licence.

The objectives of including water quality obligations in the licence are to ensure that Sydney Water produces drinking water that is fit for human consumption and recycled water that is fit for its intended use.

The operating licence should generally not duplicate the requirements of other legislative or regulatory instruments. Such duplication can potentially create unnecessary regulatory burden and lead to confusion about what legislative requirement should prevail. However, the obligation could be included in the operating licence if the monitoring and enforcement provisions of the other legislative or regulatory instrument are not sufficient.

Based on our preliminary analysis, we are considering the following changes to the operating licence:

- ▼ remove the obligation for Sydney Water to meet the *Fluoridation of Public Water Supplies Act 1957* and associated reporting requirements
- ▼ redraft the obligation to manage water quality in accordance with ADWG and ARWG for greater clarity, to ensure that a Water Quality Management System (WQMS) is developed
- ▼ remove the obligation for the preparation of a 5-year DWQMP
- ▼ revise the reporting obligations to align with the requirements and outputs of a WQMS for drinking and recycled water.

Our views on these issues are outlined further below.

3.2.1 Drinking water

The inclusion of a drinking water obligation in the operating licence needs to be considered in light of the requirements in the *Public Health Act 2010* and the *Public Health Regulation 2012*.

As discussed in Chapter 2, Sydney Water as a supplier of drinking water⁵¹ is required under the *Public Health Act 2010* and the *Public Health Regulation 2012* to develop a quality assurance program, which addresses the elements of the Framework for Management of Drinking Water Quality (Framework) as outlined in the ADWG.⁵² The water quality obligations in the current licence were developed before this requirement was incorporated into the *Public Health Act 2010* and *Public Health Regulation 2012*.

The continued inclusion of obligations to address public health risks from drinking water in the new operating licence could therefore duplicate the *Public Health Act 2010* and the *Public Health Regulation 2012*. However, if the Chief Health Officer is satisfied that a water utility is subject to other appropriate licensing or regulatory requirements, an exemption can be granted from requiring a quality assurance program under the *Public Health Act 2010*.⁵³

Consideration should therefore be given to whether water quality should be regulated under the operating licence or the *Public Health Act 2010*. Our view is that water quality regulation should remain as part of the operating licence. This is based on our well established processes to ensure ongoing compliance. In particular, IPART conducts a comprehensive audit of Sydney Water's activities each year, including compliance with the requirements of the ADWG. NSW Health is consulted prior to the audit, and any concerns or areas of interest that it may have are included in the audit scope. Further, if a water quality issue is identified in the audit, IPART will closely liaise with NSW Health regarding resolution. We also note that under the existing arrangements, NSW Health and Sydney Water have a protocol dealing with water quality monitoring and incident reporting.

Under the *Public Health Act 2010*, NSW Health would be able to review Sydney Water's quality assurance program at any time.⁵⁴ However, NSW Health currently does not have a defined auditing program, nor does it have the established framework in which to carry this out.

Further, the Act requires that the operating licence includes terms and conditions that ensure Sydney Water's systems and services meet quality and performance standards in relation to water quality.⁵⁵

⁵¹ *Public Health Act 2010*, s 5.

⁵² *Public Health Regulation 2012*, cl 34.

⁵³ *Public Health Act 2010*, s 25(3).

⁵⁴ *Public Health Regulation 2012*, cl 34(c).

⁵⁵ *Sydney Water Act 1994*, s 14(1)(c).

IPART seeks comments on the following:

- 1 Should the operating licence obligations for drinking water be retained, given the presence of similar requirements under the *Public Health Act 2010*?
- 2 If the licence obligation for drinking water is retained, should it be subject to the Chief Health Officer granting an exemption from requiring a quality assurance program under the *Public Health Act 2010*?

3.2.2 Recycled water

The risk associated with recycled water quality is not directly addressed in other regulatory instruments. The *Public Health Act 2010* has no provisions to directly address recycled water quality. The Minister for Health is only able to restrict or prevent the use of unsafe water.⁵⁶ The POEO Act requires an EPL for large treatment plants,⁵⁷ but these do not address recycled water quality.

The lack of regulatory oversight in other legislation supports the inclusion of obligations for recycled water quality in the operating licence. We note that there are synergies in regulating both drinking water and recycled water quality under the one regulatory instrument.

3.2.3 Fluoridation

Sydney Water, as a water supply authority, is required to comply with the *Fluoridation of Public Water Supplies Act 1957*, the *Fluoridation of Public Water Supplies Regulation 2012* and the *Fluoridation Code of Practice 2011*.⁵⁸

The Fluoridation Code is prepared by NSW Health and applies to all new and existing water treatment plants in NSW. Sydney Water is responsible for ensuring that it complies with the Fluoridation Code.⁵⁹ The Fluoridation Code outlines monitoring, reporting and auditing requirements. Fluoridation monitoring results are reported to NSW Health, who is responsible for confirming monitoring results and following up with any non-compliances. NSW Health also provides training for plant operators and NOW provides technical advice on treatment plant operations.

In this case, we consider the current operating licence requirement for Sydney Water to comply with the Fluoridation Code and report to NSW Health is unnecessary, as it duplicates the requirement of the *Fluoridation of Public Water Supplies Regulation 2012* and the Fluoridation Code.

⁵⁶ *Public Health Act 2010*, s 16(1).

⁵⁷ *Protection of the Environment Operations Act 1997*, s 48.

⁵⁸ Centre for Oral Health Strategy, NSW Department of Health, *New South Wales Code of Practice for Fluoridation of Public Water Supplies*, 2011.

⁵⁹ *Fluoridation of Public Water Supplies Regulation 2012*, s 7, 8 and 14.

We consider that the current requirement in the operating licence to comply with the fluoridation plant operating targets, as set out in the Fluoridation Code, should be removed from the operating licence and Reporting Manual. Furthermore, the monthly reporting of fluoridation monitoring to NSW Health should also be removed. However, we welcome stakeholder submissions on this matter.

IPART seeks comments on the following:

- 3 Given the requirements of the *Fluoridation of Public Water Supplies Act 1957*, the *Fluoridation of Public Water Supplies Regulation 2012* and the *New South Wales Code of Practice for Fluoridation of Public Water Supplies 2011*, should fluoridation requirements in the operating licence be removed?

3.2.4 System management approach to water quality obligations

Management of water quality

Both the AGWR and ADWG (collectively called 'the Guidelines') outline a framework for managing water quality, which, if followed, result in the development of a WQMS. While Sydney Water routinely produces water of a high quality, we consider the operating licence should require a WQMS. This would ensure a holistic approach to the management of water quality and that the intentions of the Guidelines are met.

Sydney Water is required to manage drinking water and recycled water quality in accordance with the ADWG and the AGWR. The current licence obligations are targeted at managing water quality in accordance with the Guidelines, but do not specifically require an organisation to follow the framework within the Guidelines or have a WQMS.

Clarifying the clauses to require Sydney Water to maintain a system that is consistent with the Guidelines would:

- ▼ ensure that Sydney Water develops a WQMS for both drinking and recycled water
- ▼ make the licence requirements the same as the requirement under the public health legislation
- ▼ bring Sydney Water's operating licence into line with Hunter Water's operating licence, and provide greater consistency for utilities, IPART, auditors and the public.

IPART seeks comments on the following:

- 4 Should the operating licence's water quality obligations for drinking water and recycled water be changed to require Sydney Water to maintain a Water Quality Management System that is consistent with the *Australian Drinking Water Guidelines* and *Australian Guidelines for Water Recycling*?

Output of Water Quality Management System

Development of a WQMS using the Framework in the Guidelines produces a range of outputs, which we have detailed in Appendix A.

The principle outputs from the WQMS are:

- ▼ documentation of critical control points, critical limits and target limits
- ▼ operational monitoring plan
- ▼ corrective action protocols
- ▼ monitoring program
- ▼ incident and emergency response protocol
- ▼ annual report
- ▼ recycled/drinking water quality improvement plan.

Under the WQMS, a water quality improvement plan should be developed in consultation with senior management and address the short-term and long-term programs required for the ongoing implementation of the Guidelines. It is a planning document, which undergoes annual review and incorporates feedback from incidences, events and audits.

Currently, Sydney Water is required to develop a 5-year DWQMP, which must include strategies for the comprehensive management of the quality of drinking water. Sydney Water is also required to:

- ▼ revise that plan every 5 years
- ▼ implement procedures and processes for the appropriate management of the entire drinking water system
- ▼ annually report on implementation of the DWQMP, including activities and programs undertaken over the previous 12 months.⁶⁰

⁶⁰ *Sydney Water Operating Licence 2010-2015*, s 2.1(b), (c), (d) and (f).

Rather than placing an operating licence obligation on Sydney Water, which would require it to produce additional reports, it may be of greater benefit to use the output from the WQMS to provide oversight and information to NSW Health, IPART and the general public. For example, Sydney Water could be required to provide a copy of the water quality improvement plan to NSW Health and/or place it on its website.

IPART seeks comments on the following:

- 5 Should the operating licence's obligation to produce a 5-year Drinking Water Quality Management Plan be removed?
- 6 Should the operating licence's reporting requirements be changed to utilise the output of the Water Quality Management System?
- 7 Are there any other obligations that should be included in the operating licence to address the risks associated with drinking water or recycled water quality?

4 Infrastructure

The performance of Sydney Water's infrastructure (or assets) can have implications for its customers, public health and safety, the environment and the community.

The objective of infrastructure provisions in the operating licence is to ensure Sydney Water provides sufficient levels of service both now and in the longer-term, consistent with the expectations and requirements of its customers. These provisions also minimise the risk to the environment and broader community associated with potential infrastructure failure.

This chapter outlines the infrastructure requirements of the existing operating licence, presents our preliminary views on potential changes, and seeks stakeholder views on the infrastructure provisions of the new operating licence.

4.1 What are the current infrastructure operating licence obligations?

There are a number of obligations in Sydney Water's current operating licence that relate directly to infrastructure. The main infrastructure obligations, which are detailed in Chapter 3 of the licence, include:

- ▼ **Asset management**
 - the requirement for Sydney Water to manage its assets consistent with an Asset Management Framework⁶¹
 - requirements for the content and outcomes of the Asset Management Framework.⁶²
- ▼ **System performance standards, performance indicators and response time requirements**
 - targets for 3 system performance standards (the water pressure, water continuity and sewage overflow standards)⁶³ and response times requirements to high priority leaks and breaks⁶⁴

⁶¹ *Sydney Water Operating Licence 2010-2015*, cl 3.1.1.

⁶² *Sydney Water Operating Licence 2010-2015*, cl 3.1.2.

⁶³ *Sydney Water Operating Licence 2010-2015*, cl 3.3.1, 3.3.2 and 3.3.3.

⁶⁴ *Sydney Water Operating Licence 2010-2015*, cl 3.5.

- requirements for record systems for measurement and reporting of indicators.

▼ **Priority Sewerage Program (PSP)**

- the operating licence outlines a government requirement to provide sewerage services to a number of peri-urban areas. This requirement includes the dates for the service to be provided and the number of lots to be connected in each area.⁶⁵

The discussion in this chapter on Sydney Water's infrastructure performance is broken up into the above topics. For each of these topics we outline:

- ▼ the regulatory requirements pertaining to infrastructure
- ▼ the obligations in the current operating licence and Sydney Water's compliance history with respect to these obligations
- ▼ our preliminary views on potential changes to the infrastructure performance obligations of the licence, and the related issues and questions on which we seek submissions.

4.2 Asset management

Asset management can be described as a means by which organisations realise value from assets by translating the organisation's objectives into asset-related decisions, plans and activities, using a risk based approach.⁶⁶

Sydney Water operates a large base of high value assets that are critical to the provision of water, sewerage and stormwater services to the residents of Sydney, the Illawarra and the Blue Mountains. Asset management ensures that these assets realise their value for Sydney Water, its customers and stakeholders, both in the short and long-term.

The following sections discuss asset management provisions in the current operating licence and potential amendments to these provisions.

⁶⁵ Sydney Water Operating Licence 2010-2015, cl 3.6.

⁶⁶ International Organisation for Standardisation, *ISO 55000 Asset Management – Overview principles and terminology*, 2014 p 1.

4.2.1 Regulatory requirements

Section 14(1) of the Act outlines the terms and conditions that must be included in the operating licence.

An operating licence is subject to the terms and conditions determined by the Governor but (so far only as is relevant to the ambit of the operating licence) must include terms and conditions under which the Corporation is required:

- (a) to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems and services for supplying water, providing sewerage services and disposing of waste water, and
- (b) to provide, operate, manage and maintain a stormwater drainage system within the capacity of the stormwater drainage system included in the business undertaking transferred under Part 3 from the Water Board to the Corporation as at the date of the transfer of the business undertaking.

4.2.2 Operating licence obligations and compliance history

Asset management obligations have been included in the last 2 Sydney Water licences. The current operating licence:

- ▼ requires Sydney Water to manage its assets consistent with its Asset Management Framework⁶⁷
- ▼ prescribes the content and outcomes of the Asset Management Framework⁶⁸
- ▼ describes when Sydney Water needs to notify IPART of changes to the Asset Management Framework.⁶⁹

Our discussion of asset management will be focussed on the first 2 clauses.

The Reporting Manual also requires Sydney Water to report on the state of its assets in a biennial (every 2 years) 'State of the Assets Report'.

Sydney Water has achieved full compliance for all the audited asset management obligations in the last 3 years of the current licence.

⁶⁷ *Sydney Water Operating Licence 2010-15*, cl 3.1.1.

⁶⁸ *Sydney Water Operating Licence 2010-15*, cl 3.1.2.

⁶⁹ *Sydney Water Operating Licence 2010-15*, cl 3.2.

4.2.3 Preliminary views of potential changes

Asset Management System

In this review we will consider whether the licence should:

- ▼ prescribe in detail the content of the Asset Management Framework (as per Sydney Water's current operating licence), or
- ▼ adopt a system based approach to asset management, similar to the approach we have applied for licences of other public water utilities (see Box 4.1).

Our preliminary view is that the operating licence should include requirements for Sydney Water to adopt an Asset Management System consistent with the International Standard for Asset Management ISO 55001:2014 (ISO 55001:2014). We have not yet formed a preliminary view on whether the system should be certified. This will be determined by the result of the cost benefit analysis later in the review.

The ISO 55001:2014 provides organisations with a systematic and structured approach for developing asset management systems. It also allows organisations sufficient flexibility to align activities and processes with their own objectives and resources. ISO 55001:2014 represents the application of best practice principles in asset management, which is appropriate given the criticality of the assets managed by Sydney Water.

A recent IPART workshop regarding the auditing of asset management clauses found that implementation of ISO 55001:2014, if properly managed, should provide improved outcomes. The workshop included infrastructure specialists from all major public water utilities as well as other interested stakeholders.

Box 4.1 Asset management obligations of public water utility operating licences

The operating licences of the Sydney Catchment Authority (SCA), Hunter Water Corporation (Hunter Water) and State Water Corporation (State Water) include obligations relating to asset management systems.

The SCA and Hunter Water 2012–2017 Operating Licences currently require the utilities to develop / maintain:

...a Management System that is consistent with:

- a) the BSI PAS 55:2008 (PAS 55) Asset Management standard;
- b) the Water Services Association of Australia's Aquamark benchmarking tool; or
- c) another asset management standard agreed to by IPART (**Asset Management System**).

PAS 55 is a British Standard that was the predecessor of the newer international ISO 55001:2014 Standard. At the time of drafting SCA's and Hunter Water's licences, ISO 55001:2014 was still under development.

SCA is now developing a system based on PAS 55, while Hunter Water's asset management system was developed based on Aquamark. However, Hunter Water has recently approached IPART for approval to change its asset management system to be consistent with ISO 55001:2014.

State Water's 2013-2018 operating licence is the most recent licence granted to a NSW public water utility. Clause 4.1 of this licence requires that:

By 30 June 2018, State Water must develop a Management System that is consistent with:

- a) The *International Standard ISO 55001:2013 Asset Management – Management systems – Requirements*; or
- b) Another asset management standard agreed to by IPART (**Asset Management System**).

In the case of an Asset Management System that is developed under the *International Standard ISO 55001:2013 Asset Management – Management systems – Requirements*, State Water must ensure that:

- a) By 30 June 2018, the Asset Management System is certified by an appropriately qualified third party to be consistent with the *International Standard ISO 55001:2013 Asset Management – Management systems – Requirements*; and
- b) Once the Asset Management System is certified under clause 4.1.2(a) above, the certification is maintained during the remaining term of the Licence.

The inclusion of the ISO Standard and the requirement for certification in State Water's operating licence reflects our latest thinking on asset management obligations.^a

^a IPART, Review of the Operating Licence for State Water Corporation, July 2012.

A further consideration for Sydney Water's operating licence is whether the asset management system, if adopted, should also be certified. If certification is carried out by appropriately qualified auditors⁷⁰ we consider there may be potential for IPART to reduce our own auditing requirements by relying on the certification and surveillance audits.

IPART seeks comments on the following:

- 8 Should Sydney Water's operating licence move to a systems standard approach for asset management, as has occurred for other public water utilities?
- 9 Is ISO 55001:2014 the most appropriate asset management Standard or is there another standard that we should consider?
- 10 Should the operating licence require the Asset Management System to be certified to ISO 55001:2014 or simply be consistent with this Standard?
- 11 What should be the required timeframe for developing and/or certifying the Asset Management System?
- 12 What are the costs and benefits of moving to a certified system?

State of the Asset Report

Our preliminary view is to maintain State of the Assets reporting requirements, but not to be prescriptive about its format. Rather, we intend to align it with one or more of the outputs of the new management system.

Sydney Water's Reporting Manual requires it to provide a biennial report on the state of its assets to IPART. The Reporting Manual prescribes the content of the State of the Assets Report.⁷¹ The latest State of the Assets Report is a short document (18 pages) detailing the current state of assets, the short and long-term investments and key initiatives for 12 asset classes. We understand that this report is prepared for Sydney Water management and a copy is given to IPART. IPART uses this report to inform our audit process.

However, implementing an Asset Management System may mean that a State of the Assets Report is not required. Alternatively, it may take a different form. For example, as extracts of existing system documents such as:

- ▼ description of asset portfolio (as required by part 4.3 of ISO 55001:2014)
- ▼ copies of the report to top management on the performance of assets (as required by part 5.3 of ISO 55001:2014)
- ▼ copies of action plans to address risks and opportunities (as required by part 6.1 of ISO 55001:2014).⁷²

⁷⁰ Qualified auditors should have water industry experience.

⁷¹ IPART, *Reporting Manual for Sydney Water Corporation June 2013*, cl 3.3.1.

⁷² ISO, *ISO55001: Asset Management - Management systems requirements*, January 2014, pp 7 and 9.

Appendix B compares current state of the assets reporting to the equivalent or similar ISO 55001:2014 requirements.

IPART seeks comments on the following:

- 13 Should the biennial 'State of the Assets reporting' continue in its current form with the content and format prescribed by IPART in the Reporting Manual or would it suffice for Sydney Water to provide IPART with asset information by providing copies of reports produced as part of the ISO 55001:2014 Asset Management System?

4.3 System performance standards

System performance standards define the minimum level of performance or service required of Sydney Water. System performance standards have 2 essential components:

- ▼ they *measure* the performance of the utility with respect to one or more operational parameters
- ▼ they compare this performance against a defined *target level*.

Unlike performance indicators, which are simply passive measures of performance, the inclusion of the target determines compliance. Performance that does not meet the target level would constitute a breach of the operating licence and result in reduced compliance grades, action or penalties.

4.3.1 Regulatory Requirements

System performance standards are included in the operating licence in accordance with Section 14(1) of the Act, which requires that the operating licence:

...must include terms or conditions under which the Corporation is required:

- (c) to ensure that systems and services meet the quality and performance standards specified in the operating licence in relation to water quality, service interruptions, pricing and other matters determined by the Governor and set out in the operating licence.

4.3.2 Current operating licence obligations and compliance history

Since the first Sydney Water operating licence was issued in 1995, System performance standards have been included in the areas of *Water Quality*,⁷³ *Water Continuity*, *Water Pressure* and *Sewage Surcharges*.

⁷³ While originally the Water Quality standard was included in the same section as service interruptions, water quality now forms a separate section of the licence.

These system performance standards were originally expressed as a percentage of customers experiencing service interruption or failure. Following reviews of licence standards in 2001 and 2006, the original standards have now been amended. There are now 5 system performance standards (numbered SPS1 – 5), which are expressed in absolute numbers, and 3 response time requirements.⁷⁴

Current system performance standards and historical performance

Water Pressure Standard

The Water Pressure Standard (SPS1) requires that no more than 6,000 properties experience a water pressure failure in a financial year in Sydney Water’s drinking water supply systems.⁷⁵ The operating licence also defines when a water pressure failure is taken to have occurred and the definition of a water pressure failure.⁷⁶

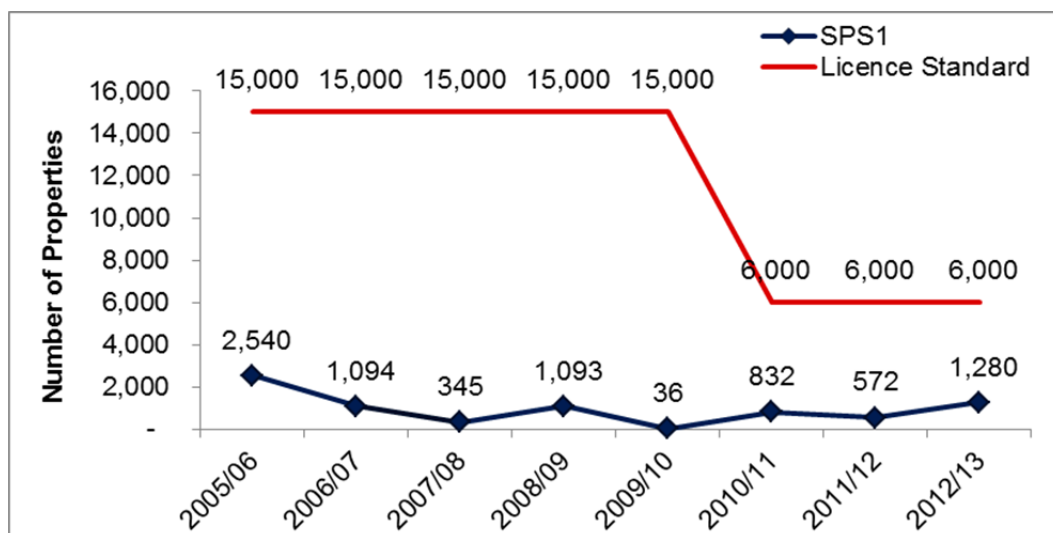
The definition of a water pressure failure or when it is taken to have occurred has not changed in the last 2 licences. However, in 2010 the target number of properties was reduced from 15,000 to 6,000 (6,000 properties currently equates to 0.33%⁷⁷ of properties connected to water supply). Performance with respect to this standard has been well within this maximum target for the last 8 years (Figure 4.1).

⁷⁴ *Sydney Water Operating Licence 2010-2015*, cl 3.3.

⁷⁵ *Sydney Water Operating Licence 2010-2015*, cl 3.3.1.

⁷⁶ *Sydney Water Operating Licence 2010-2015*, cl 14.1, p 49.

⁷⁷ Calculated based on 2012/13 National Water Initiative (NWI) indicator C4 data which is reported by Sydney Water annually. C4 (total connected properties water supply 000s) = 1,844. Available online at http://www.nwc.gov.au/__data/assets/excel_doc/0005/36338/NPR-Urban-2012-13-Part-B.xlsx

Figure 4.1 SPS 1 - Annual number of water pressure failures

Water Continuity Standard

The Water Continuity Standard is comprised of 2 measures:

- ▼ SPS 2 - no more than 40,000 properties experience an unplanned water supply interruption exceeding 5 hours in a financial year
- ▼ SPS 3 - no more than 14,000 properties experience 3 or more unplanned water supply interruptions of more than 1 hour duration in a financial year.⁷⁸

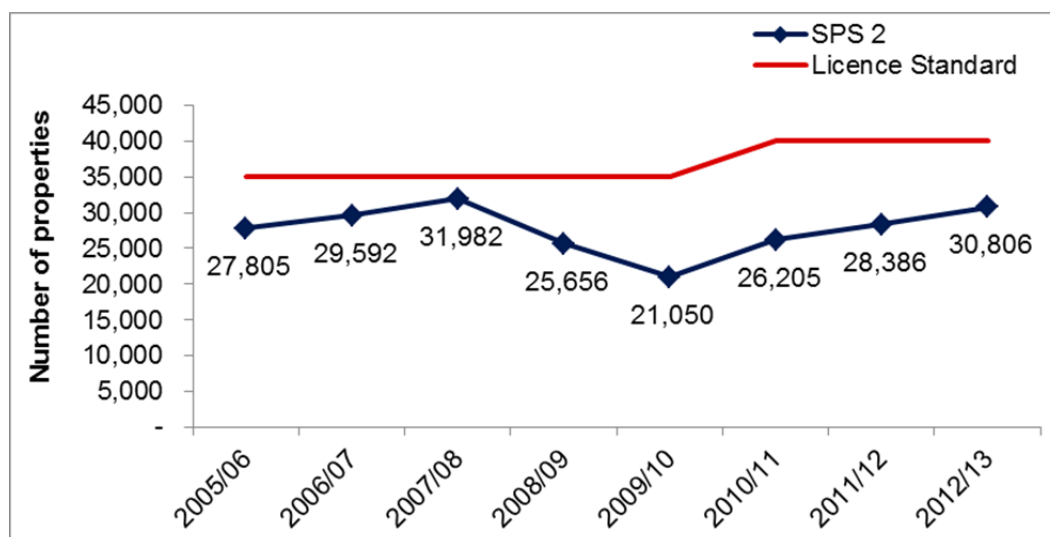
The Water Continuity Standard, which previously measured both planned and unplanned water supply interruptions, changed in the current licence to include a measure of unplanned interruptions. These were considered to be of greater inconvenience to customers than planned interruptions.

The target level for SPS 2 increased from 35,000 to 40,000 in the current licence. Performance in the last 8 years has fluctuated (Figure 4.2). However, it has never exceeded the target at either of these levels (the largest number of properties measured against this performance standard was 31,982 in 2007/08. The target level of this indicator equates to 2.2%⁷⁹ of connected properties.

⁷⁸ Sydney Water Operating Licence 2010-2015, cl 3.3.2.

⁷⁹ Calculated based on 2012/13 National Water Initiative (NWI) indicator C4 data which is reported by Sydney Water annually. C4 (total connected properties water supply 000s) =1,844. Available online at http://www.nwc.gov.au/_data/assets/excel_doc/0005/36338/NPR-Urban-2012-13-Part-B.xlsx

Figure 4.2 SPS 2 - Number of properties experiencing unplanned water interruptions exceeding 5 hours



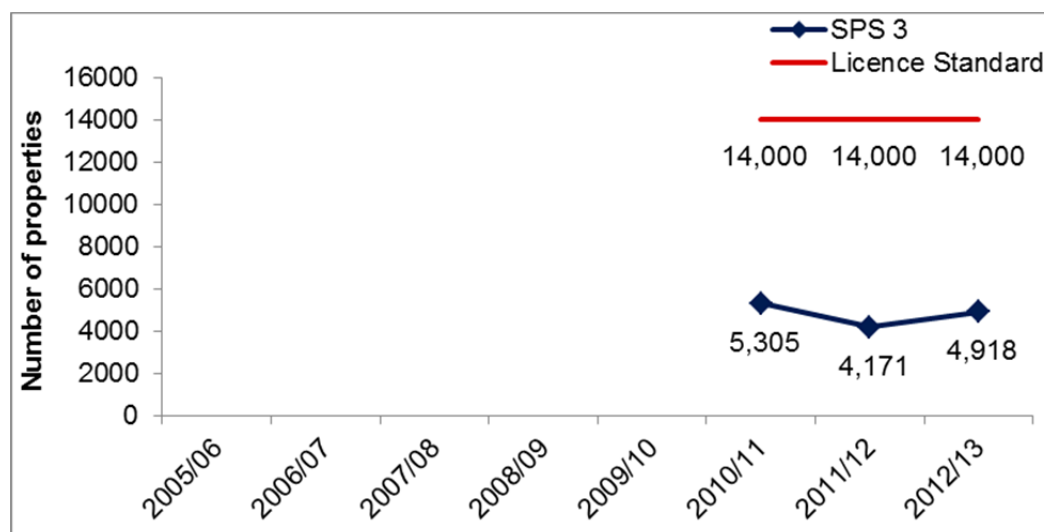
The definition of ‘unplanned water interruption’ includes interruptions resulting from damage caused by a person, other than Sydney Water, or from a power failure.⁸⁰ This is slightly inconsistent with the definition in Hunter Water’s licence, which excludes interruptions caused by third party damage.

The second component of the Water Continuity Standard is the multiple unplanned water interruptions standard (SPS 3). Under this standard, Sydney Water must ensure that no more than 14,000 properties experience 3 or more unplanned water interruptions of more than 1-hour duration in a financial year. This target level is equivalent to 0.76%⁸¹ of properties. The multiple unplanned interruptions to the Water Continuity Standard commenced in 2010/11 and 3 years of historical data is available. Performance to date has been well within the maximum target (Figure 4.3).

⁸⁰ Sydney Water Operating Licence 2010-2015, cl 14.1.

⁸¹ Calculated based on 2012/13 National Water Initiative (NWI) indicator C4 data which is reported by Sydney Water annually. C4 (total connected properties water supply 000s) =1,844. Available online at http://www.nwc.gov.au/__data/assets/excel_doc/0005/36338/NPR-Urban-2012-13-Part-B.xlsx

Figure 4.3 SPS 3 - Number of properties affected by 'multiple' (≥ 3) unplanned interruptions per year



Sewage Overflow Standard

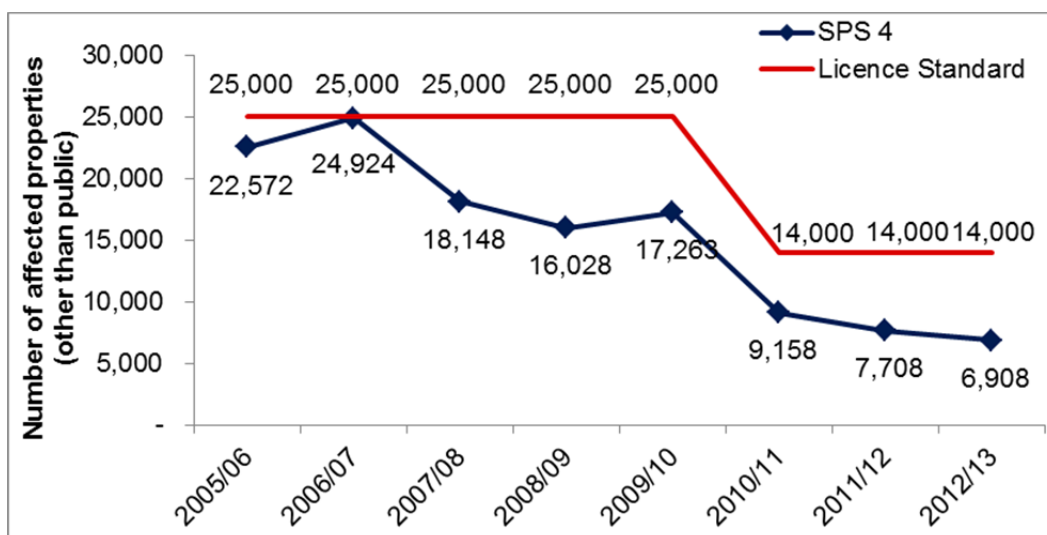
The Sewage Overflow Standard is the final system performance standard included in the licence. It is comprised of 2 components.

The first part of the Sewage Overflow Standard (SPS 4) requires Sydney Water to ensure that no more than 14,000 properties (other than public properties) experience an uncontrolled sewage overflow in dry weather in a financial year.⁸² This was reduced from 25,000 in the 2010-15 licence. Over the last 8 years, the number of private properties experiencing uncontrolled dry weather sewage overflows has declined from a high of 24,924 in 2006/07 to 6,908 in 2012/13. The 14,000 property target level is equivalent to 0.78%⁸³ of sewerage connected properties. Current performance is at approximately 50% of the allowed maximum target value (Figure 4.4).

⁸² *Sydney Water Operating Licence 2010-2015*, cl 3.3.3.

⁸³ Calculated based on 2012/13 National Water Initiative (NWI) Indicator C8 data which is reported by Sydney Water annually. C8 (Total connected properties - sewerage 000s) = 1,795. Available online at http://www.nwc.gov.au/__data/assets/excel_doc/0005/36338/NPR-Urban-2012-13-Part-B.xlsx

Figure 4.4 SPS 4 - Number of properties (other than public) experiencing uncontrolled dry weather sewage overflows



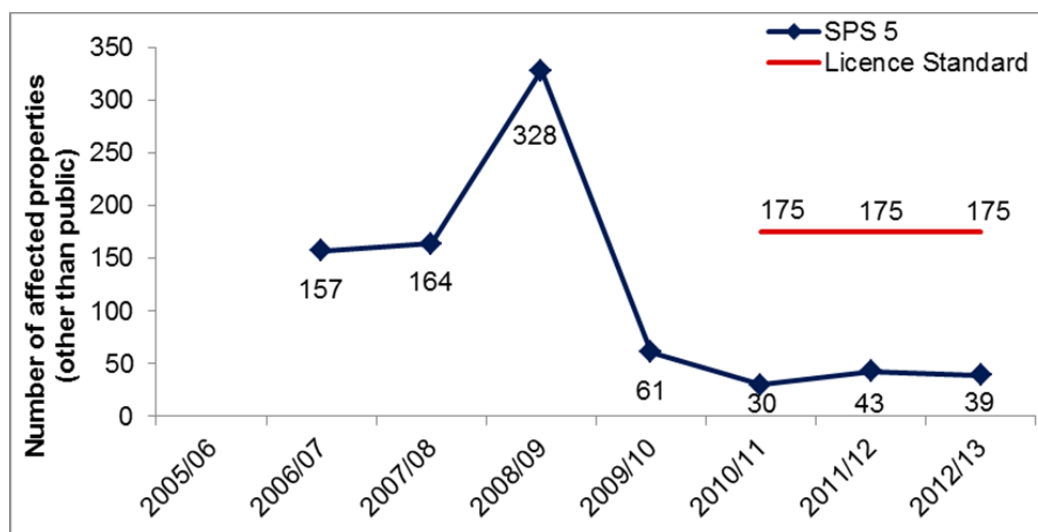
The second part of the Sewage Overflow Standard (SPS 5) addresses and limits multiple dry weather sewage overflows. The standard limits the maximum number of private properties that may experience 3 or more uncontrolled dry weather sewage overflows to 175.⁸⁴

The target level is equivalent to 0.01%⁸⁵ of sewerage connected properties. The standard has only been in place during the term of the current licence. However, data exists for this measure since 2006/07. During the term of the standard, Sydney Water has never exceeded the target. Prior to the standard being in place, there were as many as 328 private properties experiencing 3 or more uncontrolled dry weather sewage overflows. Performance over the last 3 years has been well within the allowed target (Figure 4.5).

⁸⁴ Sydney Water Operating Licence 2010-2015, cl 3.3.3.

⁸⁵ Calculated based on 2012/13 National Water Initiative (NWI) Indicator C8 data which is reported by Sydney Water annually. C8 (Total connected properties - sewerage 000s) = 1,795. Available online at http://www.nwc.gov.au/_data/assets/excel_doc/0005/36338/NPR-Urban-2012-13-Part-B.xlsx

Figure 4.5 SPS 5 - Number of properties (other than public) experiencing multiple (≥ 3) uncontrolled dry weather sewage overflows



Response Times for Water Mains Breaks

Water mains breaks can potentially damage property, cause road closures and pose risks to human health. They also result in the loss of water.

Burst water mains may reflect a failure of the operation of the utility's infrastructure. Data about asset failures, such as burst water mains, provide information about the performance of the infrastructure and the effectiveness of asset management activities.

Response time targets have been included in the operating licence since 2005. The response time targets in the current licence were simplified from the original targets, which imposed 2 target levels for each category of break/leak. The current operating licence requires that:

- ▼ Sydney Water's response to water main breaks and leaks (as measured from the time Sydney Water receives notification of a break or leak to the time Sydney Water stops the loss of water) will be as follows:
 - (1) Priority 6 breaks/leaks 90% of jobs within 3 hours
 - (2) Priority 5 breaks/leaks 90% of jobs within 6 hours
 - (3) Priority 4 breaks/leaks 90% of jobs within 5 days.⁸⁶

Sydney Water's performance with respect to the response time targets is presented in the 3 figures below.

⁸⁶ Sydney Water Operating Licence 2010-2015, cl 3.5.

Figure 4.6 Response Time 1 - Priority 6 leaks response time target

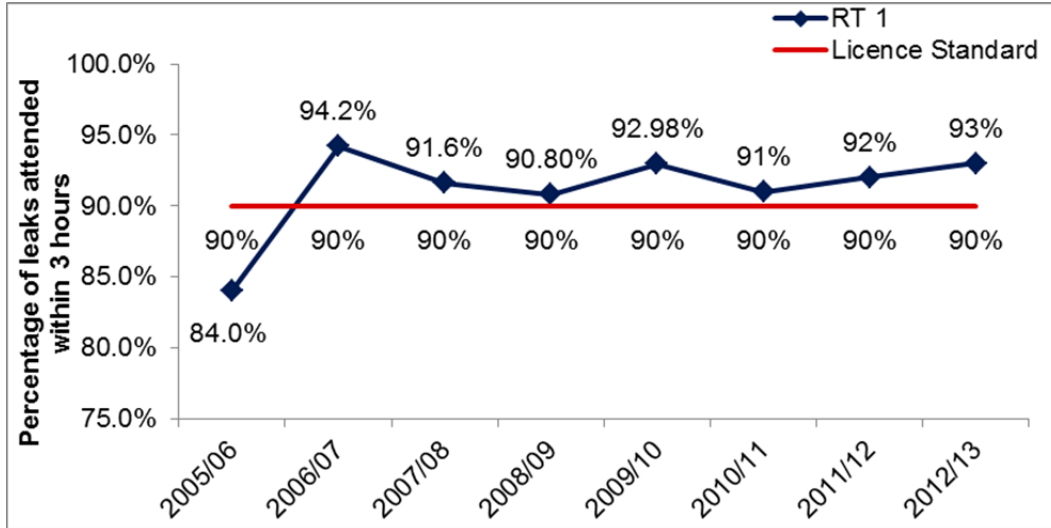


Figure 4.7 Response Time 2 - Priority 5 leaks response time target

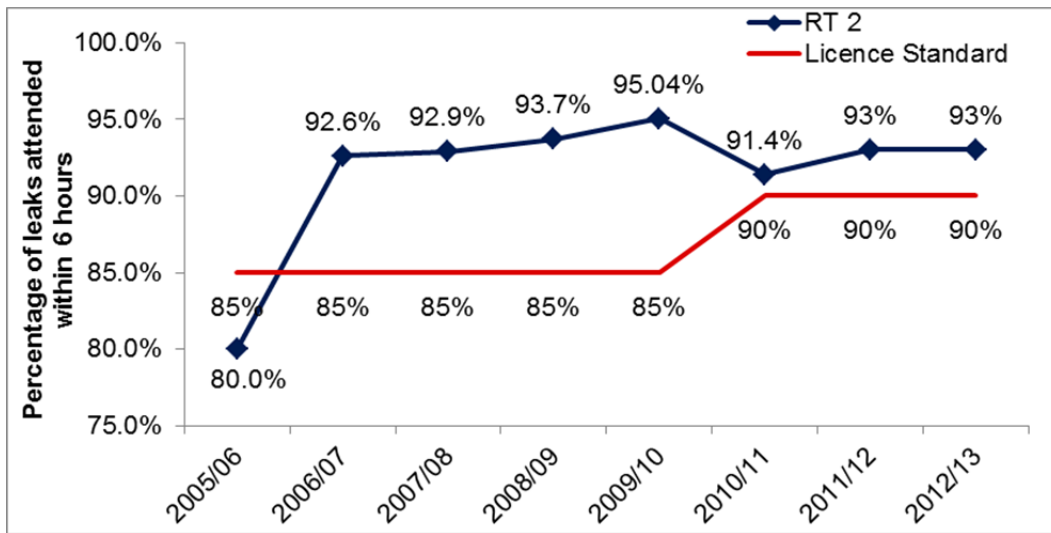
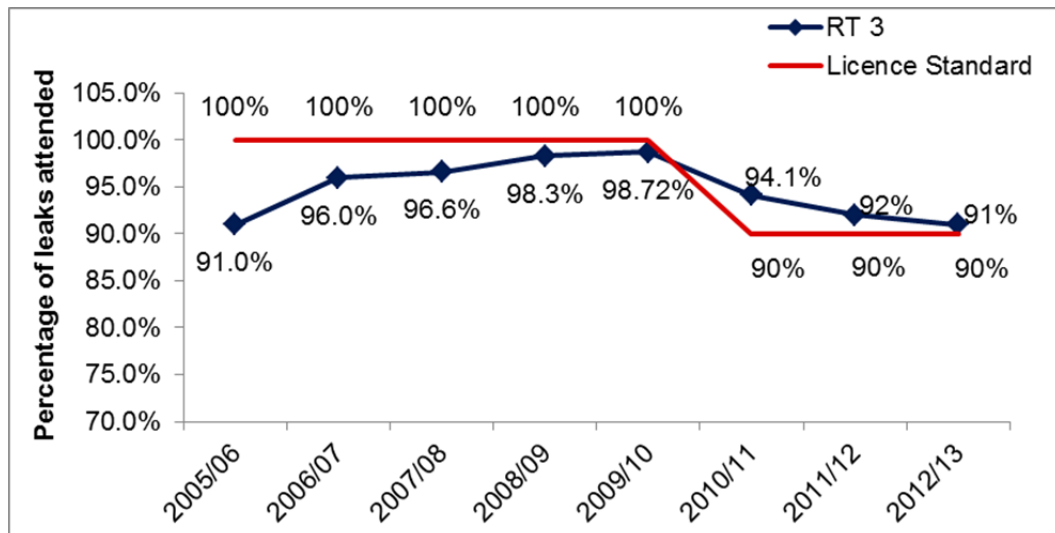


Figure 4.8 Response Time 3 - Priority 4 leaks response time target

4.3.3 Potential changes to performance standards

The need for system performance standards reflects the fact that Sydney Water is a monopoly provider of essential services. These standards are aimed at ensuring that customers receive a suitable level of service consistent with their needs and expectations. The standards recognise that some failures will occur within a system, but these failures should be limited to a level consistent with the expectations of customers.

We are mindful that there are often trade-offs between the level of service provided to customers and the costs of providing this service. Performance standards should not generate levels of service that fall short of customers' needs and expectations and they should also not be set at levels that exceed customers' willingness to pay.

In reviewing system performance standards we need to be mindful of:

- ▼ Sydney Water's historic performance with respect to the standards
- ▼ any benefits of keeping indicator definitions and target levels consistent for valid year to year comparisons of performance
- ▼ customers' service level expectations
- ▼ the costs of complying with standards and customers' willingness to pay.

We do not have a preliminary view on whether system performance standards should be modified and are seeking comment to assist in our analysis. We welcome stakeholder comments on suitable system performance standards for Sydney Water.

IPART seeks comments on the following:

- 14 Should the definition of an “unplanned water interruption” be made consistent with Hunter Water’s to exclude interruptions resulting from third parties or power failures? If so, should the target level decrease to reflect this exclusion?
- 15 What would be the impact of removing the word 'uncontrolled' from the definition in the licence of sewerage overflows? Should any sewerage overflow affecting private property be counted?
- 16 Do the current system performance standards (measures and levels) align with customer expectations and preferences or should we consider changing or adding to these standards?

Potential changes to water mains response times requirements

An important question for this review is whether the response times and target definitions are appropriate, particularly with respect to the highest priority main breaks/leaks. A priority 6 break/leak is described as a break/leak that:

- a) is to result or results in a major loss of water
- b) is to cause or causes damage to property or
- c) is to pose or poses immediate danger to the environment or people.⁸⁷

This definition suggests that, with a priority 6 break/leak, there is potential for damage to property and danger to the environment or people. A priority 6 break/leak also reflects a significant failure of Sydney Water’s infrastructure. We will consider whether the current requirement of a response time of 3 hours for 90% of jobs is appropriate. This will be based on the community’s expectations and willingness to pay, the cost of achieving or exceeding this target level, and any constraints or external factors that impact on Sydney Water’s performance in this area.

We will also consider whether there should be requirements for Sydney Water to notify IPART of any instances when the response time target is not achieved, and/or when a significant main break/leak occurs (regardless of response time). Additionally, we will also consider the frequency and form of such potential notification requirements (eg, immediately, quarterly or for annual audits).

As a priority 6 break/leak may represent a major asset failure, with potential impacts on the community, the environment and property, notification of these incidents and the circumstances leading up to them may provide useful information to us, to assess the suitability of licence obligations. The information may also be used to direct current or future audits or to ensure that Sydney Water’s risks, consequences and strategies of asset management are well understood, appropriately applied and fed back into Sydney Water’s Asset Management System.

⁸⁷ *Sydney Water Operating Licence 2010-2015*, Sch 3, p 93.

Currently, we do not have a preferred position on the need to change the water main break/leak response time requirements and welcome comments from stakeholders.

IPART seeks comments on the following:

- 17 Should Sydney Water notify IPART of significant asset failures (such as a priority 6 break/leak) within a specified timeframe after any incident?
- 18 What are the costs and benefits of achieving the main break/leak response time targets?
- 19 Are the mains break/leak response time requirements still appropriate and reflective of community expectations and customer willingness to pay?

4.4 Priority Sewerage Program (PSP)

The PSP was announced by the NSW Government in 1997 and was a component of the Government's waterways package to address wastewater and stormwater problems by 2021.⁸⁸ The aim of the PSP is to achieve environmental improvements and reduce human health risks by improving the sewerage management in unsewered areas in Sydney and the Illawarra. The PSP consisted of 2 stages. Stage 1 included the initial 16 suburbs, towns and villages in areas with high environmental sensitivity. A further 20 unsewered urban village areas were added in the Stage 2 extension of the program in 2001.⁸⁹

4.4.1 Current operating licence obligations and performance

PSP obligations have been included in the infrastructure section of Sydney Water's previous 2 operating licences. These obligations have required Sydney Water to meet certain milestones in the completion of the planning and delivery of Stage 1 and Stage 2 areas.

The current licence requires Sydney Water to:

- ▼ deliver 16 of the Stage 2 areas by the end of the term of the licence
- ▼ commence planning for the Yanderra area by 30 June 2015
- ▼ provide sewerage services to Austral, Menangle or Menangle Park within 24 months of either Sydney Water or a WICA licensee providing wastewater

⁸⁸ Department of Infrastructure, Planning and Natural Resources, *Sydney Water Corporation Priority Sewerage Program Jamberoo Director General's Report Section 115C of the Environmental Planning and Assessment Act*, September 2003 available online at: http://www.planning.nsw.gov.au/assessingdev/pdf/d-g_reprt_jamberoo.pdf.

⁸⁹ Gosford City Council and Sydney Water Corporation, *Brooklyn, Dangar Island, Mooney Mooney and Cheero Point Preferred Strategy for improved sewerage services*, December 2003, Available online at: http://www.gosford.nsw.gov.au/customer/document_gallery/public_studies/prefss_for_mooney_cheero_bdi.pdf

services to a significant development in an adjoining area.⁹⁰ Sydney Water is not required to do this if a WICA licensee provides wastewater services to the relevant area of the PSP.⁹¹

Schedule 4 of the operating licence also includes Nattai and Scotland Island as Stage 2 areas for the PSP. There are no requirements in the current licence with regard to the planning or construction of these areas.

The licence also includes 2 reporting obligations:

- ▼ to write to the Minister to advise reasons for delays (in the event of delays by consent authorities)
- ▼ an annual report to IPART on the progress of the scheme's implementation.⁹²

To date, Sydney Water has achieved full compliance with its PSP obligations. The latest PSP progress report by Sydney Water indicates that the construction of the PSP has been completed in the following areas:

- ▼ Agnes Banks
- ▼ Londonderry
- ▼ Glossodia
- ▼ Freemans Reach
- ▼ Wilberforce
- ▼ Yellow Rock
- ▼ Hawkesbury Heights
- ▼ Appin.

As at 1 September 2013, the detailed planning had been completed and the construction had commenced for the areas of:

- ▼ West Hoxton
- ▼ Bargo
- ▼ Cowan.

Planning had been completed, but construction had not yet commenced, for the areas of:

- ▼ Wilton
- ▼ Douglas Park
- ▼ Buxton.

⁹⁰ *Sydney Water Operating Licence 2010-2015*, cl 3.6(a) - (c).

⁹¹ *Sydney Water Operating Licence 2010-2015*, cl 3.6(a) - (d).

⁹² *Sydney Water Operating Licence 2010-2015*, cl 3.6(e) and (f).

Detailed planning had commenced for the Galston and Glenorie areas and planning is due to commence for Yanderra by 2015.⁹³

Sydney Water has not reported on any progress for the areas of Austral, Menangle or Menangle Park. Significant planning work may not have commenced yet for these schemes. The licence does not require this to occur unless wastewater services are provided to a significant development in an adjoining area.

Potential changes to the Priority Sewerage Program obligations

We do not propose to recommend any new PSP sewerage schemes within the new licence. The consideration for the new licence is whether the current obligations for completion or milestones for the incomplete projects should be retained. If Sydney Water complies with the requirements of the current licence and there are no delays to existing projects, then Yanderra will remain at the planning stage (the current licence requires Sydney Water to simply commence planning for the Yanderra area by 30 June 2015).⁹⁴

In addition to Yanderra, there are 5 remaining areas: Menangle and Menangle Park (carry over from Stage 1), Austral, Nattai and Scotland Island (Stage 2).⁹⁵ These areas have been identified as high priority/environmentally sensitive, but planning or construction has not commenced. At present, there does not appear to be any deadline for the provision of sewerage services to these areas.

Rather than oblige Sydney Water to sewer PSP areas through its operating licence, it may be more appropriate for the Government to fund these works and services directly as a community service obligation. In doing so, it could seek proposals from the market for the provision of sewerage works and/or services to these areas (this could include private operators licensed under the *Water Industry Competition Act 2006*). In such circumstances, Sydney Water could act as a bidder or a public sector comparator. This would provide a more transparent process and enhance efficiency in the provision of sewerage works and services to these areas.

IPART seeks comments on the following:

- 20 Should the new operating licence contain any obligations for the Priority Sewerage Program (eg, what, if any, requirements should be included in relation to the outstanding Priority Sewerage Program areas of Yanderra, Austral, Menangle and Menangle Park)?
- 21 Should the Government consider alternative mechanisms to achieve the policy objectives of the Priority Sewerage Program in the remaining areas?

⁹³ Sydney Water, *Annual Compliance Report Schedule E: Priority Sewerage Program Annual Report 2012-13*, 1 September 2013.

⁹⁴ *Sydney Water Operating Licence 2010-2015*, cl 3.6(b).

⁹⁵ *Sydney Water Operating Licence 2010-2015*, Schedule 4.

5 | Water conservation

Sydney Water supplies around 1.4 billion litres of water to its customers every day.⁹⁶ There is a risk that if Sydney's water supply and demand balance is not managed effectively, water customers will have to pay for potentially inefficient supply augmentation projects and or/face water restrictions that are considered too harsh (ie, too frequent and/or too long in duration).

The Government uses a whole-of-government approach to water planning, to ensure water supply and demand are in balance over the medium to long-term. The outcomes of this planning approach are documented in the Metropolitan Water Plan.⁹⁷ This plan does not impose legislated obligations on Sydney Water, rather it is a policy document.

Sydney Water's activities contribute significantly to balancing Sydney's water supply and demand. The primary objectives of including water conservation provisions in Sydney Water's operating licence are to ensure that:

- ▼ Sydney Water contributes sufficiently to meeting the Government's policy objectives in the Metropolitan Water Plan
- ▼ Sydney's water supply and demand balance is managed efficiently.

This chapter outlines the current water conservation provisions in the operating licence and examines:

- ▼ Sydney Water's performance against these provisions
- ▼ the objectives of including water conservation obligations in the operating licence
- ▼ our preliminary views on potential water conservation provisions in Sydney Water's new operating licence.

⁹⁶ Sydney Water website, <<http://www.sydneywater.com.au/SW/about-us/our-organisation/what-we-do/index.htm>>, accessed 26 May 2014.

⁹⁷ NSW Office of Water, *2010 Metropolitan Water Plan August Water for people and water for the environment, August 2010*.

5.1 What are the current operating licence obligations?

Sydney Water's operating licence has contained provisions relating to water conservation since it was first granted in 1995,⁹⁸ although it is not a specific requirement of the Act.

The obligations in Sydney Water's current operating licence that relate directly to water conservation are listed in Chapter 7 of the licence and include requirements for:

▼ Water usage level

- reduce the quantity of drinking water it draws from all sources to meet a water usage level of no greater than 329 litres per person per day by 30 June 2011 (allowing for reasonable adjustments to be made for the effects of weather on water usage)
- maintain the water usage level for the remainder of the term of the licence and, if not, demonstrate to the satisfaction of IPART that it would not have been reasonable to meet the water usage level in that year
- review the water usage level as part of the end of term review of the licence.⁹⁹

▼ Water leakage

- ensure that the water leakage level from its drinking water system does not exceed 105 megalitres per day
- determine the economic water leakage level and submit a report to IPART on this by December 2011.¹⁰⁰

▼ Water efficiency programs

- undertake and promote water efficiency programs and give due consideration to water efficiency and other water conservations measures as part of planning for future provisions of its services.¹⁰¹

▼ Water recycling program (including stormwater)

- promote, foster and encourage the production and use of recycled water in its area of operations
- meet any target relating to the production and/or use of recycled water set by the Minister from time to time, consistent with the objectives of the Metropolitan Water Plan, and implement any particular recycled water schemes indicated by the Minister to do so (although Sydney Water is not required to undertake any recycled water scheme where it is not financially viable to do so).¹⁰²

⁹⁸ *Sydney Water Corporation Operating Licence 1995-2000*, pp 10-11; *Sydney Water Operating Licence 2000-2005*, pp 20-21; *Sydney Water Operating Licence 2005-2010*, pp 26-27; *Sydney Water Operating Licence 2010-2015*, pp 30-31.

⁹⁹ *Sydney Water Operating Licence 2010-2015*, cl 7.1.

¹⁰⁰ *Sydney Water Operating Licence 2010-2015*, cl 7.2.

¹⁰¹ *Sydney Water Operating Licence 2010-2015*, cl 7.3.

¹⁰² *Sydney Water Operating Licence 2010-2015*, cl 7.4.

▼ **Water conservation strategy document and annual report**

- prepare and submit to IPART and the Minister by 31 December 2010 a 5-year water conservation strategy document covering the term of the licence, including strategies relating to water leakage, recycled water, water efficiency, and how these contribute to the objectives and targets outlined in the Metropolitan Water Plan
- provide an annual report on its progress in implementing its water conservation strategies.¹⁰³

Over the course of the operating licence, Sydney Water has achieved full compliance on all the water conservation obligations. Some of Sydney Water's key achievements in the area of water conservation include:

- ▼ not exceeding the water usage level target of 329 litres per person per day (in 2012/13, water use was 310 litres per person per day)
- ▼ implementing a number of water efficiency programs and education initiatives
- ▼ operating a number of recycled water schemes, including the newly commissioned Hoxton Park Recycled Water Scheme.¹⁰⁴

5.2 What are the objectives of water conservation obligations in the operating licence?

In the absence of the pressures of a competitive market, the operating licence is intended to ensure that Sydney Water provides its essential services efficiently and to the satisfaction of customers.

With this in mind, the water conservation obligations in the operating licence are aimed at ensuring:

- ▼ customers don't have to pay for inefficient supply augmentation projects and/or face unnecessarily harsh water restrictions
- ▼ Sydney's drinking water supplies are secured efficiently, in the absence of a competitive bulk water market and in accordance with the Metropolitan Water Plan.

¹⁰³ Sydney Water Operating Licence 2010-2015, cl 7.5.

¹⁰⁴ Sydney Water, *Water Efficiency Report 2012-13*

For instance, the current operating licence requires Sydney Water to determine the economic level of leakage from its system.¹⁰⁵ Information on the economic level of leakage can be used by:

- ▼ Sydney Water when determining its leakage management program (ie, in deciding whether it is economic to obtain an additional unit of water through active leakage reduction or from the Sydney Catchment Authority's dams or other bulk water sources).
- ▼ IPART when assessing the efficiency and prudence of Sydney Water's leakage management expenditure in a price review.

Other current licence obligations relating to the level of water usage level, water efficiency programs, water recycling programs and a water conservation strategy¹⁰⁶ are broadly consistent with the Metropolitan Water Plan and have the primary objective of ensuring Sydney Water contributes to the Government's policy objective of efficiently securing Sydney's water supply. This objective and the Metropolitan Water Plan are outlined below.

Securing Sydney's water supply

The Government has a goal to secure drinking water supplies, with the implementation of the Metropolitan Water Plan being a priority.¹⁰⁷ The Metropolitan Water Plan outlines the Government's preferred approach to ensuring water security for greater Sydney.¹⁰⁸ The Metropolitan Water Plan is reviewed periodically by the Government, taking into account the latest data, techniques and research. The 2010 Metropolitan Water Plan (the 2010 Plan) is being reviewed by the Metropolitan Water Directorate (MWD), with the new plan expected to be released in 2015.¹⁰⁹

¹⁰⁵ *Sydney Water Operating Licence 2010-2015*, cl 7.2(c).

¹⁰⁶ *Sydney Water Operating Licence 2010-2015*, cl 7.1, 7.3- 7.5.

¹⁰⁷ Department of Premier and Cabinet, *NSW 2021: A Plan to Make NSW Number One*, September 2011, p 41.

¹⁰⁸ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010.

¹⁰⁹ Metropolitan Water Directorate informal discussions.

The 2010 Plan sets out a portfolio of water supply and demand management measures and government policies to ensure water security for greater Sydney, while protecting the health of rivers and minimising the costs to the community.¹¹⁰ The 2010 Plan concentrates efforts on 4 major areas:

- ▼ **Dams:** continue to maintain and upgrade Sydney's network of dams to ensure they can continue to supply the majority of Sydney's drinking water.¹¹¹
- ▼ **Recycling:** ongoing investment in recycling and stormwater projects to boost recycled water volumes to 70 billion litres of water a year by 2015.¹¹²
- ▼ **Desalination:** operating the desalination plant at full capacity when the total dam storage level is below 70% and continue to do so until the total dam storage level reaches 80%.¹¹³
- ▼ **Water efficiency:** continued investment in water efficiency programs to save 145 billion litres of water a year by 2015.¹¹⁴

The 2010 Plan also outlines the Government's water restrictions regime and how to balance the needs of the environment through the *Water Management Act 2000*.¹¹⁵

The Metropolitan Water Plan is a policy document and Sydney Water is not obliged to contribute to its implementation, other than through legislated requirements relating to water restrictions and water sharing plans.¹¹⁶

We are interested in receiving stakeholder feedback on whether there are any other objectives that water conservation obligations in the operating licence are intended to achieve.

IPART seeks comments on the following:

- 22 Why is it necessary to include water conservation obligations in the operating licence?
- 23 What are the objectives of water conservation obligations in the operating licence?

¹¹⁰ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 11.

¹¹¹ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 23.

¹¹² NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 27.

¹¹³ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 35.

¹¹⁴ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 39.

¹¹⁵ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 12 and 55.

¹¹⁶ *Sydney Water Regulation 2011*, cl 18; *Water Management Act 2000*, s 56.

5.3 Our preliminary views on water conservation obligations in the operating licence

Our preliminary view is that the new operating licence should:

- ▼ require Sydney Water to determine its economic level of leakage, and report on its application of the economic level of leakage to its leakage management program
- ▼ require Sydney Water to use its best endeavours to develop a protocol with the MWD, which outlines the respective roles and responsibilities of Sydney Water and the MWD in developing and implementing the Metropolitan Water Plan
- ▼ not contain specific obligations relating to the level of water usage, water efficiency programs, water recycling and the water conservation strategy document and annual report.

Our views on these issues are outlined further below.

5.3.1 Water leakage

The current water leakage level in the operating licence is 105 megalitres per day.¹¹⁷ This is based on the economic level of leakage set in the 2005 operating licence.¹¹⁸ In 2011, Sydney Water determined the economic level of leakage for 2014/15 to be 97 megalitres per day \pm 20 megalitres per day.¹¹⁹ The water leakage level was not updated to reflect this new target in the operating licence as, at the time, we considered it was more cost effective to review the economic level of leakage as part of the end of term licence review.¹²⁰

Application of the economic level of leakage is aimed at ensuring that an efficient level of leakage management occurs. It recognises that up to a point, it is more efficient to obtain an additional unit of water from leakage management than another source (such as the dam). Beyond this point, the reverse applies and further expenditure on leakage management is uneconomic.

Our preliminary position is that the new operating licence should not contain a specified water leakage level and should instead require Sydney Water to:

- ▼ determine and regularly review the economic level of leakage in a manner acceptable to IPART
- ▼ report to IPART on its application of the economic level of leakage to its leakage management program.

¹¹⁷ *Sydney Water Operating Licence 2010-2015*, cl 7.2.

¹¹⁸ *Sydney Water Operating Licence 2005-2010*, cl 4.11.

¹¹⁹ Sydney Water, *Determination of Economic Level of Leakage Report to IPART*, December 2011.

¹²⁰ Updating the economic level of leakage would have changed the leakage target by a maximum of 4 megalitres per day and would only take effect in the final year of the licence.

IPART seeks comments on the following:

- 24 How often should Sydney Water review the economic level of leakage?
- 25 Should the operating licence contain any additional obligations relating to leakage in addition to those we have identified?

5.3.2 Implementing the Metropolitan Water Plan

We consider that there are 3 broad options to ensure Sydney Water contributes to meeting the objectives of the Metropolitan Water Plan. These are:

1. Government directions outside of the operating licence.
2. Operating licence requirements for a protocol with the MWD.
3. Prescriptive obligations in the operating licence, which reflect objectives or requirements of the Metropolitan Water Plan.

The first 2 options are considered immediately below. The 3rd, the question of specific requirements written into the operating licence, is considered in the next section.

Government directions

The Government could ensure Sydney Water meets the objectives of the Metropolitan Water Plan by giving Sydney Water a direction from the Portfolio Minister under the *State Owned Corporations Act 1989*¹²¹ to undertake certain activities. However, care would need to be taken in drafting such a direction to ensure that it was sufficiently clear and not unduly prescriptive.

A key difference between the above option and the option of including comparable requirements in the operating licence is that IPART audits Sydney Water's compliance with operating licence obligations.

This option could mean that water conservation obligations (other than perhaps the economic level of leakage) could be removed from the operating licence.

Protocol with the Metropolitan Water Directorate

At this preliminary stage, our current preferred option to ensure Sydney Water suitably contributes to meeting the objectives of the Metropolitan Water Plan is to place conditions in the operating licence that require Sydney Water to:

- ▼ develop a protocol with the MWD that outlines Sydney Water's roles and responsibilities in preparing and implementing the Metropolitan Water Plan
- ▼ use its best endeavours to follow the above protocol.

¹²¹ *State Owned Corporations Act 1997*, s 200.

This is broadly consistent with provisions in Hunter Water's current operating licence, which requires it to use its best endeavours to:

- ▼ develop and agree a Roles and Responsibilities Protocol with the MWD for the development of the Lower Hunter Water Plan
- ▼ maintain and comply with any Roles and Responsibilities Protocol that has been agreed and developed under the above clause.¹²²

This option could also mean that water conservation obligations (other than perhaps the economic level of leakage) could be removed from the operating licence.

Box 5.1 outlines the pros and cons of this option and ways in which the risks could be managed.

We note that in setting Sydney Water's maximum prices, our approach is to only allow Sydney Water's prudent and efficient costs of delivering its monopoly services.¹²³ We consider that other non-economic activities relating to the implementation of Government policy should be funded by the Government, on behalf of the broader community, as a Community Service Obligation.

¹²² *Hunter Water Corporation Operating Licence 2012-2017*, cl 3.3.1.

¹²³ However, under section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992*, the portfolio Minister may direct IPART to include in prices the efficient costs of complying with a specified requirement imposed on the agency.

Box 5.1 Implications of a licence condition requiring Sydney Water to have a protocol with the Metropolitan Water Directorate

Pros

- ▼ It would give Sydney Water a clear requirement to work with the Government in preparing and implementing the Metropolitan Water Plan. This is important, as Sydney Water has data and modelling capabilities that are essential for the plan to be accurately prepared.
- ▼ It would allow for changes in the Metropolitan Water Plan to be implemented by Sydney Water without the need for a licence review. The Metropolitan Water Plan is regularly reviewed, whereas the operating licence is generally only updated every 5 years.
- ▼ It would allow Sydney Water and the Government to work together using an adaptive approach to water planning, and more easily respond to changes in technologies and customer behaviours.

Cons

- ▼ It is not outcomes focussed, although Sydney Water could be required to meet certain outcomes when implementing components of the Metropolitan Water Plan.
- ▼ It may make it difficult for Sydney Water's business planning, as there are no set targets or goals (except to the extent that are outlined in the Plan) and the Government's priorities could change during the term of the licence.
- ▼ The Government is currently updating the Metropolitan Water Plan. The costs of implementing this plan (and any future revisions of it) are unknown.
- ▼ It would not create a level playing field between Sydney Water and water utilities licensed under the *Water Industry Competition Act 2006*, as those utilities do not currently have similar obligations.
- ▼ It would not be transparent, as there is no opportunity for stakeholder input into the development of the protocol or its implementation.

Ways to manage the risks

- ▼ The licence could contain an outline of what the protocol it is to cover, which would give more certainty to Sydney Water and stakeholders.
 - ▼ The protocol could be required to be approved by the portfolio minister and Sydney Water's shareholding ministers to ensure the requirements placed on Sydney Water are reasonable.
 - ▼ Sydney Water could be required to publicly report on its actions under the protocol and the efficient costs of meeting the requirements in the protocol, to ensure this is transparent.
-

IPART seeks comments on the following:

- 26 Should the operating licence require Sydney Water to develop a protocol with the Metropolitan Water Directorate, which outlines Sydney Water's roles and responsibilities in developing and implementing the Metropolitan Water Plan? If so, what constraints or parameters should be put around this requirement?

5.3.3 Other water conservation and efficiency provisions

Our preliminary view is that other specific water conservation obligations should not be included in the operating licence.

We note that the MWD is currently reviewing the Metropolitan Water Plan and the 2010 Plan does not clearly define obligations Sydney Water is expected to meet. We consider cost reflective prices and the removal of any impediments to the market receiving these price signals is the best way of ensuring the efficient use of water.

Water usage level

The water usage target in the current operating licence (329 litres per person per day by 30 June 2011)¹²⁴ was first set in the 1995 operating licence. This was based on a 35% saving from 1990/1991 baseline levels.¹²⁵ While Sydney Water is currently meeting this target, the Metropolitan Water Plan does not specify that this target is required to secure Sydney's water supply.

As outlined below, there are a number of issues or difficulties associated with including a water usage target in Sydney Water's operating licence.

The appropriate water usage level

Ideally, with water usage prices set using estimates of the long run marginal cost of supply, water customers should determine the appropriate level of water usage. The long run marginal cost of supply reflects the least cost investment (supply augmentation and/or water efficiency projects) required to balance water demand and supply over the medium to long-term (or, in other words, the long run estimate of the cost of sustaining a level of water usage).¹²⁶

If demand for water is greater than forecast, this may bring forward the need for supply augmentation and therefore increase the long run marginal cost, and prices, over time (and vice-versa). It would also indicate that consumers (as a whole) are willing to pay for additional supply augmentation and/or water efficiency measures required to accommodate increased consumption levels.

¹²⁴ *Sydney Water Operating Licence 2010-2015*, cl 7.1(a).

¹²⁵ *Sydney Water Operating Licence 1995-2000*, cl 5.14.

¹²⁶ In estimating the long run marginal cost of water supply in our price determinations for Sydney Water we often draw on information in the Metropolitan Water Plan.

We also note that in times of drought, prices can be complemented by water restrictions, if necessary.

We consider there is a risk that water usage targets in a licence would be arbitrarily set and Sydney Water would implement water conservation programs that are not necessary or uneconomic.

If a target were to be included in the operating licence, it could potentially be drawn from the Metropolitan Water Plan. The 2010 Plan contains a target of saving 145 billion litres of water each year by 2015 through water efficiency measures (including leak management).¹²⁷

However, Sydney Water is not solely responsible for meeting this target, as other government agencies, local councils and private companies can all also play a role. It is difficult to define prescriptive licence obligations when the 2010 Plan does not clearly define the targets Sydney Water is expected to meet. A further complication is that the 2010 Plan is currently being reviewed by the MWD, and is expected to be published before or soon after the new operating licence comes into force on 1 July 2015.

Factors beyond Sydney Water's control

We also note there are a range of factors that influence water consumption that are beyond Sydney Water's control, such as population and demographic changes, economic growth and weather conditions. These factors could influence Sydney Water's ability to meet a defined water usage level. It may also significantly increase the costs to meet a defined water usage level.

Water efficiency programs

The current operating licence does not prescribe specific water efficiency programs Sydney Water must implement. It only requires Sydney Water to undertake and promote water efficiency programs, and give them due consideration (along with other water conservation measures) as part of planning for future provisions of its services.¹²⁸

The 2010 Plan outlines a number of water efficiency actions. However, it does not assign specific responsibility for actions or targets to Sydney Water.

In lieu of specific targets in the Metropolitan Water Plan, the operating licence could contain a condition for Sydney Water to implement water efficiency and/or conservation programs that have a levelised cost below the long run marginal cost of water. This would ensure Sydney Water implements programs which are economically efficient.

¹²⁷ Sydney Water, *Water Efficiency Report 2012-13*, p 8.

¹²⁸ *Sydney Water Operating Licence 2010-2015*, s 7.4.

Water recycling program (including stormwater)

The current operating licence requires Sydney Water to meet a recycled water target and/or implement specific recycled water schemes only if required to do so by the Minister.¹²⁹ The Minister has not yet set any such targets during the term of the operating licence.

The operating licence also requires Sydney Water to promote, foster and encourage the production and use of recycled water in its area of operations.¹³⁰

The 2010 Metropolitan Water Plan gives a target to recycle 70 billion litres of water per year.¹³¹ However, Sydney Water is only required to implement increased recycling to homes in Rouse Hill, Hoxton Park and Ropes Crossing.¹³² The Minister has not yet required Sydney Water to implement these schemes.

The current operating licence does not require Sydney Water to undertake any recycled water scheme that is not financially viable.¹³³

Our preliminary view is that there is no need for specific water conservation provisions in the operating licence related to recycled water. There is a risk that setting recycled water targets in the licence may promote inefficient investment. In considering potential requirements for the operating licence, a fundamental question is whether there are any impediments to efficient investment in and uptake of recycled water.

We note that IPART's pricing approach currently encourages efficient investment in recycled water infrastructure through allowing the 'avoided costs'¹³⁴ of a recycled water scheme to be recovered from water and/or wastewater customers (depending on which customer group avoids these costs).¹³⁵

Reporting requirements

As outlined above, the current operating licence requires Sydney Water to produce a 5-year water conservation strategy and to report annually on its progress in implementing its strategies.¹³⁶

¹²⁹ *Sydney Water Operating Licence 2010-2015*, cl 7.4(b).

¹³⁰ *Sydney Water Operating Licence 2010-2015*, cl 7.4(a).

¹³¹ NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 5.

¹³² NSW Office of Water, *2010 Metropolitan Water Plan: Water for people and water for the environment*, August 2010, p 60.

¹³³ *Sydney Water Operating Licence 2010-2015*, cl 7.4(c).

¹³⁴ As defined in IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006, Schedule 5.

¹³⁵ IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006.

¹³⁶ *Sydney Water Operating Licence 2010-2015*, cl 7.5.

We seek stakeholder views on the value of such requirements, particularly as we are mindful not to impose unnecessary reporting requirements (and costs) on Sydney Water.

We note that related publications are available, including IPART's annual operating licence audit reports and information on the Metropolitan Water Plan.

IPART seeks comments on the following:

- 27 What are your views on our preliminary position in regard to water conservation requirements in the operating licence?
- 28 What water conservation requirements should be included in the new operating licence?

6 Environment

Sydney Water has the potential to have a significant impact on the environment through:

- ▼ extraction of water from the natural environment
- ▼ its discharges of wastewater to the environment
- ▼ its use of energy and other inputs to its supply processes
- ▼ its construction activities.

However, as discussed in Chapter 2, Sydney Water is also subject to a robust environmental regulatory regime beyond its operating licence. For example, the EPA regulates its discharges of wastewater to the environment through EPLs issued under the POEO Act.¹³⁷

In this chapter we discuss the obligations in the operating licence which assist in managing the risk to the environment from Sydney Water's activities. In doing so we:

- ▼ present the current environment obligations in the operating licence
- ▼ identify some key factors in considering environmental obligations of the new operating licence
- ▼ outline our preliminary views on potential environmental provisions of the new operating licence
- ▼ seek stakeholder views on what environmental requirements should be in the new operating licence.

We consider the environmental provisions are intended to ensure Sydney Water performs at a suitable level, consistent with its statutory objectives and the expectations of its customers.

¹³⁷ *Protection of the Environment Operations Act 1997*, s 48.

6.1 What are the current environment operating licence obligations?

There are several obligations in Sydney Water's current operating licence that relate directly to the environment. These obligations, which are listed in Chapter 6 of the licence, include the requirement to:

- ▼ maintain a certified Environmental Management System (EMS)
- ▼ prepare a 5-year environmental management plan in accordance with the EMS
- ▼ report on its performance against environmental indicators.¹³⁸

Under our risk-based approach to auditing, these requirements were audited at the commencement of the current licence, with Sydney Water receiving full compliance.¹³⁹ Since then, Sydney Water has not reported any instances of non-compliance under our exception-based reporting regime.

The environmental obligations of the current operating licence are discussed further below.

6.1.1 Requirement to maintain an EMS

Sydney Water is required to maintain an EMS certified to AS/NZS ISO 14001:2004 (as updated from time to time – ISO 14001:2004) to manage risks to the environment of its business and service delivery.¹⁴⁰

Implementation of an EMS is industry best practice and provides a framework for an organisation to identify and target the environmental impact of all its business activities.

ISO 14001:2004 specifies requirements to enable an organisation to develop and implement plans and policies that take into account the organisation's environmental impacts and its legal requirements. It does not duplicate or replace regulatory requirements, but is a mechanism to collate all regulatory requirements together. It also helps ensure compliance with these requirements.

ISO 14001:2004 requires the organisation to:

- ▼ develop an environmental policy and make this available to the public
- ▼ identify the activities it undertakes that can have a significant impact on the environment
- ▼ determine and document environmental objectives, targets and programs
- ▼ monitor and assess these targets and programs

¹³⁸ *Sydney Water Operating Licence 2010-2015*, cl 6.1 and 6.2.

¹³⁹ IPART *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011, p 30.

¹⁴⁰ *Sydney Water Operating Licence 2010-2015*, cl 6.1(a).

- ▼ evaluate compliance
- ▼ undertake internal and external review¹⁴¹
- ▼ produce a continual improvement report.¹⁴²

The requirement for implementation of a certified EMS was introduced in the 2005-2010 Sydney Water Operating Licence. Sydney Water's operating licence was the first public water utility licence to require a certified EMS. We have since introduced this requirement into Hunter Water's licence,¹⁴³ SCA's licence,¹⁴⁴ and State Water's licence.¹⁴⁵

Sydney Water's EMS was first certified in May 2005. Recertification occurs every 3 years, most recently in April 2014.¹⁴⁶

6.1.2 Requirement to prepare an environmental plan

In addition to developing and implementing a certified EMS, Sydney Water was required to prepare a 5-year Environmental Management Plan (5-year EMP), in accordance with the EMS, by 30 September 2010.¹⁴⁷ The 5-year EMP must:

- ▼ include Sydney Water's environmental objectives
- ▼ contain details of Sydney Water's program to meet the environmental objectives, including targets and timetables
- ▼ endorse the principles of ecologically sustainable development
- ▼ be integrated into Sydney Water's business plans
- ▼ be posted on Sydney Water's website and be available to the public free of charge.¹⁴⁸

Sydney Water must complete an annual report on the progress with the environmental objectives, targets and timetable. The Report is to include:

- ▼ any significant changes to the 5-year EMP
- ▼ its performance for the previous financial year in meeting the targets and timetables outlined in the 5-year EMP

¹⁴¹ Sydney Water EMS is certified and therefore undergoes external review annually.

¹⁴² AS/NZS ISO 14001:2004 *Environmental Management Systems – Requirements with guidance for use*, 2004.

¹⁴³ Clauses 6.1.2 and 6.1.3 of the Hunter Water 2012-2017 Operating Licence require the EMS to be implemented and certified by June 2017.

¹⁴⁴ Clauses 7.1.2 and 7.1.3 of the Sydney Catchment Authority 2012-2017 Operating Licence require the EMS to be implemented by 1 July 2015 and certified 30 June 2017.

¹⁴⁵ Clauses 6.1.2 and 6.1.3 of the State Water 2013-2018 Operating Licence require the EMS to be implemented and certified by 30 June 2018.

¹⁴⁶ Correspondence with Sydney Water.

¹⁴⁷ *Sydney Water Operating Licence 2010-2015*, cl 6.1(b).

¹⁴⁸ *Sydney Water Operating Licence 2010-2015*, cl 6.1(b).

- ▼ details on the programs, management actions proposed, and performance against these actions for:
 - heritage and environmentally sensitive areas under Sydney Water's control, such as Botany Wetlands
 - waste management and energy management across its operations.¹⁴⁹

The 5-year EMP is required to be reviewed and updated annually, in consultation with DECCW¹⁵⁰ and peak environmental non-government organisations.¹⁵¹

The requirement to produce a 5-year EMP has been an ongoing obligation of the operating licence since 2000.¹⁵²

6.1.3 Requirement to report on environmental indicators

Sydney Water is required to compile and report on environmental indicators according to obligations under the Reporting Manual.¹⁵³ As outlined below, the Act obliges the operating licence to include requirements relating to environmental indicators.

In 2012, IPART undertook a review of the metropolitan public water utilities' performance indicators.¹⁵⁴ Sydney Water's environmental indicators were further refined in 2013.¹⁵⁵ This review and all performance indicator reporting requirements of the operating licence are discussed in Chapter 8.

Table 6.1 below lists the environmental performance indicators and Sydney Water's performance against them for the current licence. These indicators include:

- ▼ the number of POEO Act penalty notices
- ▼ sewer overflow
- ▼ biosolids produced
- ▼ electricity consumption.

Sydney Water has performed consistently in all areas.

¹⁴⁹ IPART, *Reporting Manual for Sydney Water Corporation*, June 2013, p 15.

¹⁵⁰ Now the EPA.

¹⁵¹ *Sydney Water Operating Licence 2010-2015*, cl 6.1(d).

¹⁵² *Sydney Water Operating Licence 2000-2005*, cl 9.3.

¹⁵³ *Sydney Water Operating Licence 2010-2015*, cl 6.2.

¹⁵⁴ IPART, *Review of Metropolitan Public Water Utilities' Performance Indicators*, August 2012.

¹⁵⁵ IPART, *Reporting Manual for Sydney Water Corporation*, June 2013, p 15.

Table 6.1 Environmental Performance Indicator and Sydney Water's performance 2010-2013

Number	Indicator	2010/11	2011/12	2012/13
E1	Total number of proceedings and Penalty Notices under the <i>Protection of the Environment Operations Act 1997</i> issued to the water utility	2	0	1
E2	Total number of proceedings and Penalty Notices under the <i>Protection of the Environment Operations Act 1997</i> issued to contractors engaged by the water utility	1	1	1
E3	Total electricity consumption by water assets (kWh/ML of water supplied to be included)	271.1	274	275.1
E4	Total electricity consumption by sewer assets (kWh/ML of sewage collected)	459.6	429.4	470.1
E5	Electricity consumption from renewable sources or generated by the water utility expressed as a percentage of total electricity consumption	14.6%	16.6%	16.2%
E6	Total number of Controlled Sewage Overflows that occur in dry weather	25	11	15
E7	Total volume of Controlled Sewage Overflows that occur in wet weather (ML)	5,350	22,471	13,858
E8	Licence Standard (% responded to within 6 hours)	29	30	21
E9	Total volume of Controlled Sewage Overflows that occur in dry weather, expressed as a percentage of total sewage effluent discharged to the environment	<0.001%	<0.001%	0.001%
E10	Percentage of trade waste customers in compliance with their wastewater discharge limits as outlined in their water utility trade waste agreements	-	-	92%
E11	Total mass of bio solids produced by the water utility (dry tonnes)	38,074	40,592	39,939
E12	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated	72%	72%	57%
E13	Total mass of solid waste generated by the water utility (tonnes)	224,642	214,875	144,401
E14	Total area of clearing of native vegetation (ha)	1.8	4	0.02
E15	Total area of native vegetation rehabilitated (ha)	2.2	2.3	3.9
E16	Total area of native vegetation gain due to rehabilitation, replanting and protection by Sydney Water	0.4	-1.7	3.9

Number	Indicator	2010/11	2011/12	2012/13
E17	Total number and nature of proceedings or Penalty Notices of conditions under licences issued to the water utility by NOW for water management	-	-	0

Source: IPART, *NSW Water Utilities Performance 2012-2013 Database (Part B)*, 2 April 2014, Available online at: http://www.ipart.nsw.gov.au/files/78869b04-ddcb-4eeb-9191-a30100c807fb/Database_-_Performance_Indicator_Database_-_March_2014.xlsx

6.2 Key considerations in reviewing environmental obligations of the operating licence

In considering environmental obligations of the new operating licence, it is important to consider the:

- ▼ best practice regulatory principles as outlined in Chapter 1
- ▼ the requirements of the Act
- ▼ broader legislative and regulatory framework in which Sydney Water operates.

Requirements of the Act

Under the Act, the operating licence must require Sydney Water to compile indicators of the direct impact on the environment of its activities to:

- ▼ enable preparation of an Annual Report on its performance
- ▼ provide information for a year to year comparison in relation to performance in this area.¹⁵⁶

As part of the Annual Report¹⁵⁷ Sydney Water must publish a statement on the implementation of its special objectives under the Act¹⁵⁸, which are to “reduce risks to human health and prevent degradation of the environment.”¹⁵⁹

The EPA must review this statement and evaluate whether, in its opinion, the best environmental outcome has been achieved.¹⁶⁰

The operating licence currently complies with this requirement through the provision relating to Sydney Water’s environmental indicators (see section above).

¹⁵⁶ *Sydney Water Act 1994*, s 14(1)(d).

¹⁵⁷ This report is sent to the EPA as a requirement under the *Sydney Water Act 1994*, s 22(7).

¹⁵⁸ *Sydney Water Act 1994*, s 22(6).

¹⁵⁹ *Sydney Water Act 1994*, s 22(1).

¹⁶⁰ *Sydney Water Act 1994*, s 22(7).

The broader legislative and regulatory framework

In determining the environmental obligations of the operating licence, we need to be mindful of the broader legislative and regulatory framework. This is so as not to duplicate other requirements and impose unnecessary conditions in the operating licence.

Outlined below are key elements of the broader environmental regulatory framework.

POEO Act

The EPA is the prime environmental regulator in NSW. It regulates Sydney Water's wastewater discharges to the environment through EPLs issued under the POEO Act.¹⁶¹ These licences require Sydney Water to monitor and report on discharges from their wastewater systems, which are defined in each licence.

The EPA can issue clean up notices and fines to both licensed and non-licensed activities.¹⁶²

Water Management Act

NOW is the water resource manager in NSW. It is responsible for ensuring the sustainable use of water resources, including that sufficient flows are provided to the environment. Under the *Water Management Act 2000*, NOW regulates Sydney Water's (and the SCA's):

- ▼ extractions of water from the natural environment through the issuing of water access licences
- ▼ works in river systems and waterways through the issuing of water supply works approvals – this includes, for example, Sydney Water's works in managing the Botany Wetlands.¹⁶³

EP&A Act

Sydney Water's construction and development activities are subject to environmental planning approval under the EP&A Act.¹⁶⁴

¹⁶¹ *Protection of the Environment Operations Act 1997*, s 43.

¹⁶² *Protection of the Environment Operations Act 1997*, Part 4 and 5.

¹⁶³ *Water Management Act 2000*, s 56(1) and (2).

¹⁶⁴ *Environment Planning and Assessment Act 1979*, s 110 and 111.

6.3 What environmental obligations should be in the new operating licence?

We seek stakeholder views on what environmental obligations should be included in Sydney Water's operating licence. Our preliminary views are outlined below.

6.3.1 Retain the requirement to maintain an EMS certified to AS/NZS ISO 14001:2004

An EMS is considered best practice. If developed and applied correctly, an EMS can enhance efficiency and help ensure environmental regulatory requirements and objectives are met. To meet the expectations of their shareholders and customers, we would expect many large firms in competitive markets to have an EMS.

As with all management systems, there are a number of outputs produced from the EMS, including the following:

- ▼ environmental policy
- ▼ register of requirements
- ▼ register of agreements
- ▼ training records
- ▼ corrective actions reports
- ▼ internal audit reports
- ▼ continual improvement report.¹⁶⁵

IPART seeks comment on the following:

- 29 Should we continue to require Sydney Water to maintain an Environmental Management System certified to AS/NZS ISO 14001:2004?

6.3.2 Remove the requirement to have an Environmental Management Plan

We consider the operating licence requirement to prepare and annually review the 5 year EMP and to provide an Annual Report on the 5 year EMP is no longer necessary.

A certified EMS has a number of outputs – including the requirement to develop and publish an environmental policy. The Act also requires Sydney Water to publish an Annual Report on its environmental performance (to be reviewed by the EPA). The combination of these 2 requirements could be seen as duplicating the requirement for the 5-year EMP.

¹⁶⁵ A more detailed outline of AS/NZS ISO 14001:2004 requirements are presented in Appendix C.

We note that when introducing requirements for a certified EMS into the operating licences of other public water utilities, we have removed the separate requirement for an ongoing environmental plan.

IPART seeks comment on the following

- 30 As Sydney water is required to implement an Environmental Management System, is there any additional benefit in producing a 5-year Environmental Management Plan?

6.3.3 Retain requirement to report on environmental indicators

Consistent with the Act,¹⁶⁶ we plan to retain the current provision in the operating licence requiring Sydney Water to report on its performance against environmental indicators in accordance with the Reporting Manual.

We have recently undertaken a review of performance indicators and do not intend to further review them at this time.

IPART seeks comment on the following:

- 31 Are there any other environmental obligations we should include in the operating licence?

¹⁶⁶ *Sydney Water Act 1994*, s 14(1)(d).

7 Customers rights

In this chapter we discuss customer obligations in Sydney Water's operating licence. As the largest water utility in Australia, Sydney Water provides drinking water, wastewater, recycled water and stormwater services to about 4.7 million customers in Sydney, the Illawarra and the Blue Mountains.¹⁶⁷

In this chapter we:

- ▼ present the current customer obligations in the operating licence and Sydney Water's performance against these provisions
- ▼ identify some key factors in considering customer obligations of the new operating licence
- ▼ outline our preliminary views on the customer provisions of the new operating licence
- ▼ seek stakeholder views on what customer requirements should be in the new operating licence.

Australia has a legislative framework that is aimed at protecting consumers from unfair practices of suppliers, for example, the *Competition and Consumer Act 2010* (Cth).

However, customers of utility services in Australia have traditionally been afforded even greater protection.¹⁶⁸ This is particularly the case where the utility is a monopoly and provides essential services to customers.

Sydney Water is no exception and has customer protection provisions within its operating licence. These are described below.

¹⁶⁷ Sydney Water, *Summary Annual Report*, 2013, p 2.

¹⁶⁸ *Sydney Water Act 1994*, Division 7, *Hunter Water Act 1991*, Division 5.

7.1 What are the current customer operating licence obligations?

Sydney Water's customer obligations are listed in Chapters 4 and 5 of the licence. Schedule 2 of the licence also outlines Sydney Water's full customer contract.

The licence includes the following:

- ▼ the full customer contract¹⁶⁹
- ▼ required practices and procedures relating to customer hardship, debt, water flow restrictions and disconnection for non-payment¹⁷⁰
- ▼ an obligation to appoint and consult with at least one Customer Council, with associated obligations regarding this group's charter¹⁷¹
- ▼ a requirement to establish and maintain internal and external dispute resolution processes¹⁷²
- ▼ an obligation to extend complaint handling and complaint resolution procedures to consumers (property renters) in the same manner that customers (property owners) are treated.¹⁷³

The customer obligations of the current operating licence are discussed below.

7.1.1 Customer contract

The Act requires that the terms and conditions of a customer contract are set out in Sydney Water's operating licence,¹⁷⁴ and various provisions in relation to the customer contract.¹⁷⁵ Schedule 2 of Sydney Water's existing operating licence contains the customer contract.

The customer contract sets out the rights and obligations of customers and Sydney Water. These rights and obligations are in addition to the rights and obligations conferred by the Act and any other law.

A copy of the customer contract must be posted on Sydney Water's website for downloading by any person and provided to customers free of charge upon request. Sydney Water must also prepare a pamphlet explaining the customer contract and provide this to customers at least annually or when changes are made to the contract.

¹⁶⁹ *Sydney Water's Operating Licence 2010- 2015*, cl 4.1.

¹⁷⁰ *Sydney Water Operating Licence 2010-2015*, cl 4.4 and Schedule 2, s 5 and 6.

¹⁷¹ *Sydney Water Act 1994*, s 15 and *Sydney Water Operating Licence 2010-2015*, cl 4.5.

¹⁷² *Sydney Water Operating Licence 2010-2015*, cl 5.1 and 5.2.

¹⁷³ *Sydney Water Operating Licence 2010-2015*, Schedule 2, cl 4.3.

¹⁷⁴ *Sydney Water Act 1994*, s 54.

¹⁷⁵ *Sydney Water Act 1994*, Part 6, Division 7.

7.1.2 Financial hardship provisions

Sydney Water's operating licence and its customer contract include provisions relating to customer hardship, debt, water flow restriction and disconnection for non-payment. These obligations were added to the licence in 2010 in response to community affordability concerns.¹⁷⁶

Sydney Water's existing operating licence requires:

- ▼ a customer hardship policy for residential customers, which helps residential customers in financial difficulty better manage their bills
- ▼ a payment plan for residential customers who are, in Sydney Water's opinion, experiencing financial difficulty
- ▼ conditions for disconnection of supply or water flow restriction in accordance with the disconnection procedure set out in the customer contract
- ▼ provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential customers experiencing financial difficulty.¹⁷⁷

The operating licence also includes various customer notification requirements.¹⁷⁸

7.1.3 Customer Council and Council Charter

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

The existing operating licence requires Sydney Water to maintain a Customer Council Charter that addresses:

- ▼ the broad areas of customer interest where Sydney Water must consult with a Customer Council
- ▼ the membership on the Customer Council, including selection criteria
- ▼ communication of outcomes to the public
- ▼ administrative arrangements, including the conduct and recording of meetings, the provision of information, the remuneration of council members, and the process for amending the charter.

¹⁷⁶ *Sydney Water Operating Licence 2010-2015*, cl 4.4.

¹⁷⁷ *Sydney Water Operating Licence 2010-2015*, cl 4.4(a).

¹⁷⁸ *Sydney Water Operating Licence 2010-2015*, cl 4.4(c)-(e).

7.1.4 Internal and external complaints handling procedures

The existing operating licence requires Sydney Water to:

- ▼ maintain an internal dispute resolution process based on *Australian Standard AS/ISO 10002:2004 MOD Customer Satisfaction – Guidelines for Complaint Handling* (as amended and replaced from time to time)
- ▼ establish or be a member of an industry-based dispute resolution body that has been approved by the Minister.¹⁷⁹

7.1.5 Extend complaint handling and resolution procedures to consumers

Sydney Water's customers are all property owners receiving a service (ie, property renters are not considered customers). For this reason, there is an obligation in the operating licence which extends the complaint handling and complaint resolution procedures to property renters, who are termed consumers in the licence.

7.2 Key considerations in reviewing customer obligations of the operating licence

When considering customer obligations in the new operating licence, it is important to consider the best practice regulatory principles outlined in Chapter 1.

It is also important to consider any Act requirements of the operating licence, as well as Sydney Water's performance in this area and any broader legislative and regulatory requirements.

7.2.1 Requirements of operating licence in the Act

The Act requires:

- ▼ Sydney Water's full customer contract to be included in the operating licence¹⁸⁰
- ▼ terms and conditions relating to the establishment of, and consultation with, one or more Customer Councils.¹⁸¹

There are no other requirements within the Act that relate to customer licence obligations.

¹⁷⁹ Sydney Water is a member of the Energy & Water Ombudsman NSW, *Sydney Water Operating Licence 2010-2015*, cl 5.2(a).

¹⁸⁰ *Sydney Water Act 1994*, s. 54 and Part 6, Division 7.

¹⁸¹ *Sydney Water Act 1994*, s 15.

7.2.2 How has Sydney Water performed?

To determine Sydney Water's performance against customer obligations, we have reviewed the findings of recent operating audits conducted by IPART and reviewed a number of customer indicators for Sydney Water.

Under our risk-based approach to auditing, Sydney Water's customer licence obligations were audited at the commencement of the current licence, receiving full compliance.¹⁸² Since then, Sydney Water has not reported any instances of non-compliance under our exception based reporting regime.

Table 7.1 below lists Sydney Water's customer related performance indicators over the last 5 years, to provide an indication of its performance in this area.

Table 7.1 Sample of Sydney Waters' customer performance indicators

Indicator	2008/09	2009/10	2010/11	2011/12	2012/13
Customer complaints (including EWON)	12,498	8,986	7,398	7,527	8,252
Customer complaints resolved in 10 business days (%)	91	86	86	86	90
No. of residential customers disconnected for non-payment	0	0	0	0	0
No. of residential customers with water flow restrictions for non-payment	3,881	4,720	5,792	5,241	6,514
Residential customers on instalment plants	-	-	-	-	1.8%
No. of customers receiving payment assistance vouchers	2,430	3,016	3,203	3,184	2,422

Source: IPART, *NSW Water Utilities Performance 2012-2013 Database (Part B)*, 2 April 2014, Available online at: http://www.ipart.nsw.gov.au/files/78869b04-ddcb-4eeb-9191-a30100c807fb/Database_-_Performance_Indicator_Database_-_March_2014.xlsx; Sydney Water, *Sydney Water Annual Report*, 2013.

From the above data we note:

- ▼ In 2012/13, the number of customer complaints remained low (8,252 or 0.45% of customers). Comparable energy utilities have much higher complaint numbers (the percentage of complaints in 2012/13 from small retail customers was about 1.46% for Energy Australia, 1.64% for Origin Energy, and 5.72% for AGL Sales).¹⁸³

¹⁸² IPART, *Sydney Water Corporation Operational Audit 2010/11 report to the Minister*, November 2011, p 18.

¹⁸³ IPART, *Information Paper - Customer service performance of electricity retail suppliers 1 July 2008 to 30 June 2013*, December 2013. Please note that in this comparison Sydney Water's complaint level is overstated when compared to these energy authorities, since Sydney Water's figures include retail, network and EWON complaints.

- ▼ The number of customers that are subject to water flow restriction for non-payment of bills has been slowly rising over the last 5 years (with the exception of 2011/12, where there was a slight decrease). However, the 2012/13 figure for water flow restrictions is still considered low (6,514 or 0.36% of total customers).
- ▼ The number of customers receiving payment assistance vouchers has declined over the last 3 years and is currently at similar levels to 2008/09.¹⁸⁴

7.3 What customer obligations should be in the new operating licence?

Our preliminary view is that, other than relatively minor editing and drafting, no changes to customer obligations of the operating licence are necessary. The reasons for our preliminary position are outlined below.

7.3.1 Customer Contract

We consider the legislative requirement to include Sydney Water's customer contract in the operating licence and the requirements with respect to varying the customer contract to be outdated (see Box 7.1). However, a change to the Act would be required to remove this obligation. This is beyond the scope of this review.

We have not identified any specific amendments we would like to make to Sydney Water's customer contract at this time. We welcome any proposals from Sydney Water and other stakeholders to improve the existing customer contract.

For example, at the last review of the operating licence in 2010 we strengthened customer hardship provisions in both in the licence and customer contract. We also reviewed and slightly modified customer rebates.

IPART seeks comments on the following:

- 32 Is Sydney Water's customer contract easy to comprehend and can it be enhanced in any way?

¹⁸⁴ IPART, *Information Paper - Customer service performance of electricity retail suppliers 1 July 2008 to 30 June 2013*, December 2013.

Box 7.1 Possible alternative regulatory requirements if the customer contract is removed from the operating licence

We consider the legislative requirement to include the customer contract in the operating licence and the statutory requirements with respect to varying the customer contract to be outdated and inefficient. In effect, this requirement makes the customer contract difficult to amend during the 5-year licence term.

For Sydney Water to amend its customer contract, it would require approval from the Governor. Sydney Water would also be required to publish a notice in a daily newspaper circulating in its area of operations, summarising the proposed changes. This notice would need to be published 6 months before any changes could take effect (unless a shorter period is approved by the Minister).^a

We consider that customer contracts should change from time to time to better reflect changing customer needs and the emergence of a more competitive market.

If the current legislative requirements could be removed, it is still important that some form of ongoing regulation is maintained for any monopoly utility providing essential services to its customers. For Sydney Water, the form of regulation could be as follows.

First, the existing requirement that Sydney Water's Customer Council considered any changes to customer contracts should be retained.

Second, a more light handed approach to regulation should be adopted. A minimum set of contractual requirements for supply to small retail customers should be developed. Typically, this would include requirements for billing, credit policy, disconnection, water flow restrictions and hardship policies. These minimum requirements could be set out in a Regulation and IPART could check Sydney Water's compliance. We note a similar approach has been adopted for the regulation of retail customer contracts within the energy industry.

Finally, we understand that in the future this type of approach may be applied to private water utilities regulated under the *Water Industry Competition Act 2006*. If, and when this is developed, consideration could then be given to also applying the same approach to public water authorities.

^a Sydney Water Act 1994, s 59.

IPART seeks comments on the following:

- 33 Would it be beneficial to amend the *Sydney Water Act 1994* to eliminate the difficulties associated with varying the customer contract? Further, what should be done in the interim?

7.3.2 Financial hardship provisions

Our preliminary position is that the current financial hardship provisions are operating effectively and should be retained. We note that customers impacted by affordability issues still remain low (especially in comparison to the energy industry).¹⁸⁵ We would welcome comments from Sydney Water and other interested stakeholders on whether further enhancements could be made to these obligations

IPART seeks comments on the following:

- 34 Are the current hardship provisions in the operating licence and customer contract sufficient?

7.3.3 Customer Council and Charter

Past IPART audits of these obligations have found that Sydney Water's Customer Council is working effectively.¹⁸⁶ Based on this and the aim to foster customer involvement in the operation of Sydney Water, we intend to retain the current obligations.

We would welcome comments from stakeholders (especially members of the Customer Council) on whether the role and functions of Sydney Water's existing Customer Council could be further enhanced.

IPART seeks comments on the following:

- 35 Is Sydney Water's Customer Council working effectively and how could its membership and community involvement be further improved?

7.3.4 Internal and external dispute resolution

There is a relatively low number of complaints against Sydney Water. In 2012/13, 90% of complaints were resolved within 10 business days. On this basis, the current obligations appear to be working effectively. Sydney Water has received full compliance against these obligations in past IPART operational audits.

IPART seeks comments on the following:

- 36 Are there any other licence obligations that should be included in the operating licence or customer contract to further enhance customer protection provisions?

¹⁸⁵ IPART, *Information Paper - Customer service performance of electricity retail suppliers 1 July 2008 to 30 June 2013*, December 2013.

¹⁸⁶ IPART, *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011, p 18.

8 Other areas for consideration

This chapter considers other issues not covered by the earlier chapters of this paper. These issues, which relate to either current licence obligations or potential obligations, include:

- ▼ Memoranda of Understanding between Sydney Water and other entities
- ▼ a Quality Management System (QMS)
- ▼ performance indicators
- ▼ contestability in the water market
- ▼ synergies with IPART's pricing function.

8.1 Memorandum of Understanding

The purpose of a Memorandum of Understanding (MOU) is to define the relationship and responsibilities between organisations. MOUs can be particularly effective where a high degree of coordination or communication is required between 2 organisations.

As discussed in previous chapters, Sydney Water's activities potentially have a significant impact on public health, the environment, and natural resources. A number of government agencies are involved in managing these areas, including:

- ▼ water resource management/water conservation (NOW and MWD)
- ▼ environment (EPA and the Office of Environment and Heritage)
- ▼ public health (NSW Health).

The Act requires Sydney Water to enter into MOUs with 3 regulatory agencies (the Water Administration Ministerial Corporation¹⁸⁷, the Director General of the Department of Health, and the EPA) and details the requirements of the MOUs.¹⁸⁸

¹⁸⁷ The NSW Office of Water (NOW) undertakes water resource management activities on behalf of the Water Administration Ministerial Corporation.

¹⁸⁸ *Sydney Water Act 1994*, s 34 - 36.

8.1.1 Current operating licence requirements

The current operating licence also requires Sydney Water to maintain a MOU with:

- ▼ The Water Administration Ministerial Corporation (NOW)
- ▼ NSW Health
- ▼ DECCW (EPA).¹⁸⁹

8.1.2 Our preliminary views on MOU requirements in the new operating licence

Good regulatory practice requires that there should be minimal regulatory duplication. The incorporation of an obligation in the operating licence that is also in the Act could be seen as regulatory duplication. To determine whether the existing obligations should stay in the operating licence, consideration needs to be given to the auditing and compliance role of IPART and the risk associated with not having an MOU. Placing an obligation in the operating licence reinforces its importance and ensures it is independently audited during the term of the operating licence.

The argument for a MOU requirement in the operating licence is linked to the:

- ▼ strength of the other regulatory instruments available to the state agency
- ▼ responsibility of the agencies in the event of an incident
- ▼ risks that arises from not having a MOU.

NSW Health is the lead agency in the response to water-related public health incidents. Ensuring a close and clear relationship between Sydney Water and NSW Health is important. The EPA and NOW licence Sydney Water's activities and are able to place obligations within those licences. The risk from not having a MOU is therefore lower for EPA and NOW than it is for NSW Health.

Our preliminary position is to retain a licence obligation in respect to the MOU with NSW Health, and to remove the licence requirement in respect to the other 2 agencies. This does not remove the legislative requirement to have MOUs with these agencies, simply that IPART will only monitor and enforce the MOU requirement with NSW Health. This is consistent with the requirements of Hunter Water's current operating licence.

¹⁸⁹ *Sydney Water Operating Licence 2010-2015*, cl 11.

From a compliance perspective, an obligation to have an MOU with a third party who is not subject to the licence is sometimes difficult to enforce. In light of this, we intend to redraft the current licence obligation to introduce a “best endeavours” requirement for Sydney Water to maintain a MOU with NSW Health.

IPART seeks comments on the following:

- 37 What are the benefits of including a licence obligation requiring Sydney Water to maintain a Memorandum of Understanding with NSW Health?
- 38 Should the Memorandum of understanding requirements with the NSW Office of Water and the Environment Protection Authority be removed from the operating licence?

8.2 Quality Management System

As outlined in earlier chapters of this paper, the following management systems are either in Sydney Water’s current operating licence or being considered for inclusion in the new operating licence:

- ▼ an environmental management system (EMS)
- ▼ an asset management system (AMS)
- ▼ a drinking water management system consistent with the ADWG (DWQMS)
- ▼ a recycled water management system consistent with the AGWR (RWQMS).

In addition to these management systems, the requirement to implement a quality management system (QMS) could also be included as a licence obligation.

Unlike the above management systems, a QMS will not directly address Sydney Water’s functions, but will assist in the integration of the management systems across all operational areas. The greatest benefit will be seen in areas such as document management, training, auditing, reporting, legislative registers and training records.

The majority of the components of the EMS, AMS, DWQMS and RWQMS can be matched to the requirements of the QMS. Therefore, the development of the QMS is the collation of established procedures rather than development of new ones. Appendix D shows where the components of a QMS are matched to the equivalent components of the other management systems. All components of the QMS, except 3, address at least 1 component of the environment, asset and water quality management systems.¹⁹⁰

¹⁹⁰ Appendix D.

If the integrated QMS was certified, this may reduce the need to audit elements that are common across all management systems within the business. This would enable operating audits to be more targeted to higher risk elements of those systems.

In this review, we intend to closely examine the costs and benefits of a new QMS licence obligation.

IPART seeks comments on the following:

- 39 What are the benefits and costs of including an obligation in the operating licence for Sydney Water to adopt an integrated Quality Management System?
- 40 If the Quality Management System requirement is included in the operating licence, what is a reasonable timeframe for implementation?
- 41 If the Quality Management System requirement is included in the operating licence, should it be required to be certified? If so, what is a reasonable time period for certification?

8.3 Performance Indicators

The Act specifically requires Sydney Water to compile indicators of the direct impact on the environment of its activities.¹⁹¹ Sydney Water is also required to monitor, record and compile data on a range of other performance indicators.¹⁹²

Performance indicators can be collected to:

- ▼ analyse a utility's operations by reviewing performance trends in relevant areas
- ▼ provide input to our licence reviews and operational audits and to assist IPART to develop performance standard targets
- ▼ enhance transparency, accountability and ultimately improve a utility's performance
- ▼ provide information to the public regarding a utility's operations
- ▼ provide data to other regulators (ie, EPA) for their legislative reporting and auditing requirements.

IPART has recently undertaken a review of the performance indicators for the major public water utilities.¹⁹³ An outcome of the review was a reduction in the number of performance indicators.

¹⁹¹ *Sydney Water Act 1994*, s 14(1)(d).

¹⁹² IPART, *Reporting Manual for Sydney Water Corporation*, June 2013, p 22.

¹⁹³ IPART, *Review of Metropolitan Public Water Utilities' Performance Indicators*, August 2012.

We now consider that this list of IPART performance indicators, along with the National Water Indicators and our annual operating audit, provides a comprehensive framework for the assessment of water utility performance in NSW.

Our preliminary position is to maintain the current set of indicators. The full list of performance indicators is provided in Appendix E.

IPART seeks comments on the following:

- 42 Should we consider any other performance indicators to enhance the framework for assessing and regulating Sydney Water's performance?
- 43 Are any performance indicators unnecessary or unduly costly to compile?

8.4 Contestability in the water market

The *Water Industry Competition Act 2006* (WIC Act) was developed to encourage competition within the water industry. It includes a licensing regime for private companies to operate water industry infrastructure and to retail water and wastewater services.¹⁹⁴ It also includes an access regime, which potentially allows third parties to access Sydney Water's monopoly water and/or wastewater distribution network in order to compete in 'upstream' or 'downstream' water or wastewater services (such as retail services).¹⁹⁵

There are currently 20 WICA licence holders. Several of these licensees are in competition with Sydney Water, particularly in the supply of water and sewerage services to some infill and peri-urban residential and commercial developments.

We would like to consider whether there is any hindrance to contestability in the water and wastewater markets as a result of obligations or rights within Sydney Water's operating licence. In particular, whether there are any provisions in the operating licence that put Sydney Water at a competitive advantage or disadvantage relative to actual or potential competitors in the water market.

IPART seeks comments on the following:

- 44 Are there any licence obligations that may hinder or enhance contestability?
- 45 Are there any licence obligations that may hinder or enhance third party access to Sydney Water's monopoly infrastructure services?

¹⁹⁴ *Water Industry Competition Act 2006*, Part 2.

¹⁹⁵ *Water Industry Competition Act 2006*, Part 3.

8.5 Synergies between the operating licence and IPART's price regulation

As mentioned in Chapter 2, IPART regulates Sydney Water's prices. In doing so, we set Sydney Water's maximum prices to reflect its prudent and efficient costs of providing water and wastewater services.

There is a close relationship between IPART's price regulation and licensing roles. For example, both the operating licence and price regulation are aimed at protecting customers from potential adverse effects of monopoly power, replicating the effects of a competitive market, and providing incentives for Sydney Water to be more efficient. Similarly, there is a relationship (and trade-off) between service standards (set by the operating licence) and prices (set to reflect efficient costs, including the costs of complying with the operating licence).

We would like to consider whether the links between the operating licence and IPART's pricing function can be improved, and how the operating licence can be designed to enhance the efficiency of Sydney Water.

IPART seeks comments on the following:

- 46 How can the operating licence be amended to enhance links with IPART's pricing function?
- 47 Can the operating licence be amended to provide added incentives to Sydney Water to pursue efficiency gains?



Appendices

A Elements and associated outputs from the AGWR and ADWG

ADWG/ AGWR

Element	Component	Output
Commitment to drinking water quality management	<ul style="list-style-type: none"> ▼ Drinking/recycled water quality policy 	<ul style="list-style-type: none"> ▼ Drinking/recycled water policy
Commitment to responsible use and management of recycled water quality	<ul style="list-style-type: none"> ▼ Regulatory and formal requirements ▼ Engaging stakeholders 	<ul style="list-style-type: none"> ▼ Stakeholder list or register
Assessment of supply	<ul style="list-style-type: none"> ▼ Recycled/drinking water supply systems analysis ▼ Assessment of water quality data ▼ Hazard identification and risk assessment 	<ul style="list-style-type: none"> ▼ Flow diagram of system ▼ Risk assessment
Preventive measures for recycled/drinking water quality management	<ul style="list-style-type: none"> ▼ Preventative measures and multiple barriers ▼ Critical control points 	<ul style="list-style-type: none"> ▼ Document of preventive measures and residual risk for significant risks. ▼ Document of critical control points, critical limits and target limits.
Operational procedures and process control	<ul style="list-style-type: none"> ▼ Operational procedures ▼ Operational monitoring ▼ Corrective action ▼ Equipment capability and maintenance ▼ Materials and chemicals 	<ul style="list-style-type: none"> ▼ Operating manuals ▼ Operational monitoring plan ▼ Monitoring protocols ▼ Corrective action protocols. ▼ Maintenance program ▼ Procedures for control of chemicals
Verification of recycled/drinking water quality	<ul style="list-style-type: none"> ▼ Recycled/drinking water quality monitoring ▼ Consumer satisfaction ▼ Short-term evaluation of results ▼ Corrective action 	<ul style="list-style-type: none"> ▼ Monitoring program ▼ Corrective action protocols.
Management of incidents and emergencies	<ul style="list-style-type: none"> ▼ Communication ▼ Incident and emergency response protocol 	<ul style="list-style-type: none"> ▼ Communication protocol ▼ Public and media communication strategy ▼ Incident and emergency response protocol

ADWG/ AGWR

Element	Component	Output
Employee awareness and training/ operator, contractor and end user awareness training	<ul style="list-style-type: none"> ▼ Employee awareness and involvement ▼ Employee training ▼ Operator, contractor and end user awareness and involvement ▼ Operator, contractor and end user training 	<ul style="list-style-type: none"> ▼ Training records
Community involvement and awareness	<ul style="list-style-type: none"> ▼ Community consultation ▼ Communication 	<ul style="list-style-type: none"> ▼ User communication information
Validation, research and development	<ul style="list-style-type: none"> ▼ Investigative studies and research monitoring ▼ Validation of process ▼ Design of equipment 	<ul style="list-style-type: none"> ▼ Validation report
Documentation and reporting	<ul style="list-style-type: none"> ▼ Management of documentation and records ▼ Reporting 	<ul style="list-style-type: none"> ▼ Document control system ▼ Annual report
Evaluation and audit	<ul style="list-style-type: none"> ▼ Long-term evaluation of results ▼ Audit of recycled/drinking water quality management. 	<ul style="list-style-type: none"> ▼ Evaluation report ▼ Audit report
Review and continuous improvement	<ul style="list-style-type: none"> ▼ Review by senior executive ▼ Recycled/drinking water quality improvement plan 	<ul style="list-style-type: none"> ▼ Recycled/drinking water quality improvement plan

Source: National Health and Medical Research Council, *Australian Drinking Water Guidelines*, December 2013; National Resource Management Ministerial Council, Environment Protection and Heritage Council and Australian Health Ministers' Conference, *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)*, November 2006.

B Comparison of the State of the Assets Report and ISO 55001:2014 outputs

Obligations of Reporting Manual clause 3.3.1	Corresponding ISO 55001:2014 requirements
A description of each group of assets	<p>Part 4.3 requires the organisation to "...define the asset portfolio covered by the scope of the asset management system.</p> <p>The scope shall be available as documented information."</p>
An assessment of the expected capability of the assets to deliver the services and meet the existing obligations consistent with the licence, the customer contract and all applicable laws with which Sydney Water must comply	<p>Part 5.3 requires reporting on the performance of the asset management system to top management.</p> <p>Part 6.1 requires the organisation to provide assurance that an asset management system can achieve its intended outcomes considering the needs and expectations of stakeholders (including, for example IPART, operating licence, customer contract, <i>Sydney Water Act 1994</i> and other legislation, reporting manual etc).</p> <p>Part 6.2.1 requires the organisation to "...establish asset management objectives at relevant functions and levels." In doing so clause 6.2.1 requires the organisation to give consideration to "the requirements of relevant stakeholders and of other financial, technical, legal, regulatory and organisational requirements in the asset management planning process."</p> <p>The asset management objectives shall:</p> <ul style="list-style-type: none"> ▼ be monitored ▼ be communicated to relevant stakeholders. <p>"The organisation shall retain documented information of the asset management objectives."</p>
An assessment of the major issues or constraints on current and future performance of the assets	<p>Part 6.1 requires that:</p> <p>"When planning for an asset management system, the organisation shall ...determine the risks and opportunities that need to be addressed to give assurance that the asset management system can achieve its intended outcomes, prevent, or reduce undesired effects and achieve continual improvement.</p> <p>The organisation shall plan:</p> <ul style="list-style-type: none"> ▼ Actions to address these risks and opportunities, taking into account how these risks and opportunities can change with time..."

Obligations of Reporting Manual clause 3.3.1	Corresponding ISO 55001:2014 requirements
The strategies and expected costs of future investment in assets	<p>Part 6.2.2 requires the organisation to "...determine and document:</p> <ul style="list-style-type: none"> ▼ the processes and methods to be employed in managing its assets over their life cycles... <ul style="list-style-type: none"> – what resources will be required... – when it will be completed... – the financial and non-financial implications of the asset management plan(s)"
Other such matters as reasonably required by IPART	<p>Part 7.5 requires that "the organisation shall determine its information requirements to support its assets, asset management, asset management system and the achievement of its organisational objectives. In doing this:</p> <ul style="list-style-type: none"> ▼ the organisation shall include consideration of: <ul style="list-style-type: none"> – the exchange of information with its stakeholders, including service providers." <p>Part 7.6.1 requires that the organisations asset management system shall include "... documented information for applicable legal and regulatory requirements."</p>

Source: ISO 55001: *Asset Management – Management systems: requirements*, January 2014.

C Components and outputs of EMS

Key components of EMS ANS/NZ ISO 14001:2004	Outputs
General requirements	Establish EMS commitment in corporate objectives Document the scope of EMS inputs
Environmental policy	Environmental policy – commitment to comply with applicable legal requirements, pollution prevention, and continual improvement
Planning policy	Planning policy that includes identifying and listing significant environmental aspects, applicable legal requirements, setting internal performance criteria and a programme to set targets and achieve objectives. i) Compile and maintain an environmental database ii) compile and maintain a register of applicable legal requirements (eg <i>POEO Act, EP&A Act, Sydney Water Corporation Act 1994, Sydney Water Operating Licence 2010-2015</i>) iii) compile and maintain a register of other agreements to which it has subscribed (eg, voluntary agreements, community agreements) iv) a programme for achieving environmental objectives and targets, including improvements identified v) establish measurable environmental performance indicators
Implementation and operation – appropriate resourcing to conduct and record programme outputs	Resource allocation Training programmes Communication procedures – internal and external. Implement and maintain procedures to receive, document and respond to communications Periodic evaluation of operational protocols Operational control procedures Emergency preparedness and response procedures and controls
Monitoring and evaluation of policy outcomes	Quantitative or qualitative environmental information gathering – methods, parameters, systems Compliance evaluation procedures Corrective and preventative action reports Record keeping Internal audit reports
Management review	Management review – periodical audit and review report Continual improvement report

Note: Outputs from the system which can be viewed are marked in **BOLD**.

Source: ANZ/ISO 14001:2004 *Environmental management systems- Requirements with Guidance for use*, December 2004.

D Comparison of management system components

AS/NZS ISO 9001:2008 Quality Management Systems	Framework for Management of Drinking Water Quality and Recycled Water Quality	AS/NZS ISO 14001:2004 Environmental Management Systems	ISO 55001:2014 Asset Management Systems
General requirements			
<i>Documentation requirements</i>	Management of documentation and records	Control of documents Control of records	Documented information
<i>Management commitment</i>	Drinking/recycled water quality policy, regulatory and formal requirements Review by senior executive, drinking or recycled water quality management improvement plan	Resources, roles, responsibilities and authority Legal and other requirements	Leadership and commitment
<i>Customer focus</i>	Regulatory and formal requirements Community consultation	Environmental aspects	Understanding the needs and expectations of stakeholders
<i>Quality policy</i>	Drinking/recycled water quality policy	Environmental policy	Asset management policy
<i>Planning</i>	Operational monitoring Drinking/recycled water quality monitoring	Planning	Determining the scope of the asset management system Actions to address risks and opportunities for the asset management system Asset management objectives and planning to achieve them Operational planning and control Management of change Asset management objectives Planning to achieve

D Comparison of management system components

<i>Responsibility, authority and communication</i>	Applying the Framework	Resources, roles, responsibilities and authority Communications	asset management objectives Leadership and commitment Organisational roles, responsibilities and authorities
<i>Management review</i>	Long-term evaluation of results, audit of drinking/recycled water quality management Review by senior executive Drinking/recycled water quality management improvement plan (element 12)	Management review	Management review Internal audit Improvement
Resource management			
<i>Provision of resources</i>	Drinking/recycled water quality management improvement plan	Resources, roles, responsibilities and authority	Resources Outsourcing
<i>Human resources</i>	Employee awareness and involvement, employee training	Competence, training and awareness	Resources Competence Awareness
<i>Infrastructure</i>	Equipment capability and maintenance Design of equipment	Resources, roles, responsibilities and authority	Operational planning and control Outsourcing
<i>Work environment</i>			
Product realisation			Actions to address risks and opportunities in the asset management system
<i>Planning of realisation processes</i>	Preventive measures and multiple barriers, critical control points	Implementation and operation	Operational planning and control Management of change
<i>Customer-related processes</i>	Community consultation, communication Regulatory and formal requirements	Environmental aspects Legal and other requirements Operational Control Communication	Communication Awareness
<i>Design and development</i>	Investigative studies and research monitoring, validation of processes, design of equipment	Operational Control	
<i>Purchasing</i>	Materials and chemicals	Operational control	Outsourcing
<i>Production and service provision</i>	Operational procedures, operational monitoring, corrective action, equipment capability and maintenance	Operational control	

<i>Control of measuring and monitoring devices</i>	Validation of processes Equipment capability and maintenance	Monitoring and measurement	Monitoring, measurement, analysis and evaluation
Measurement, analysis and improvement			
<i>Monitoring and measurement</i>	Operational monitoring Drinking/recycled water quality monitoring, consumer satisfaction Audit of drinking/recycled water quality management	Monitoring and measurement Internal audit Evaluation of compliance	Monitoring, measurement, analysis and evaluation Internal audit
<i>Control of nonconforming product</i>	Corrective action Incident and emergency response protocols Reporting	Emergency preparedness and response	Non-conformity and corrective action
<i>Analysis of data</i>	Operational monitoring Short-term evaluation of results Long-term evaluation of results	Monitoring and measurement	Information requirements
<i>Improvement</i>	Review by senior executive Drinking/recycled water quality management improvement plan	Management review Nonconformity, corrective action and preventative action	Management review Continual improvement Preventive action

Note: Coloured squares indicate areas where there is no overlap.

Source: *Environmental management systems- Requirements with Guidance for use*, December 2004; *ISO 55001: Asset Management – Management systems: requirements*, January 2014; National Health and Medical Research Council, *Australian Drinking Water Guidelines*, December 2013; National Resource Management Ministerial Conference, Environment Protection and Heritage Council and Australian Health Ministers' Conference, *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)*, November 2006; *AS/NZS ISO 9001:2008 Quality Management Systems: requirements*, December 2008.

E Sydney Water's current performance indicators

Infrastructure

IPART Indicator No.	Indicator	Definitions
I 1	The number of properties affected by an unplanned water interruption duration of more than 1 hour and less than or equal to 5 hours.	<p>Property means any real property to which either or both of the following conditions apply:</p> <ul style="list-style-type: none"> a. the real property is connected to the water utility's drinking water supply system, to the water utility's sewerage system or to the water utility's recycled water system and a charge for the services provided by one or more of those systems is levied on the owner of the real property b. the real property is within a declared stormwater drainage area for which the utility imposes a stormwater charge upon the owner of real property in that area. <p>Water Interruption means any event causing a total loss of water supply due to any cause. Water interruption excludes those caused by bursts or leaks in the service connection to internal plumbing or planned meter replacements. All interruptions not subject to notification caused by third parties or a power failure should be included. Exclude instances of reduced service levels due to, for example, low pressure. If a property experiences more than one interruption then it should be counted for each event. A water supply interruption, which causes loss of supply to 100 customers, is counted as 100 customer interruptions.</p> <p>Planned water interruption – water interruption initiated by the water utility for which at least 24 hours notice has been given to the customer.</p> <p>Unplanned water interruption means an interruption in which an occupier of a property has not received at least 24 hours notification of the interruption or an interruption that has occurred prior to the expiry of any notice provided to an occupier advising of an interruption. It also includes outages where the duration exceeds that originally notified. In this case the entire outage is classed as unplanned.</p>
I 2	Occurrence of water interruptions to affected properties (ie, the number of properties experiencing 3 or more Planned and Unplanned water interruptions) of more than one hour duration	
I 3	Events leading to planned or unplanned water interruption where 250 or more properties experience an interruption of over 5hours duration.	
I 4(S)	The number of residential properties affected by planned water supply interruptions in peak hours (5am-9am and	<p>Property as per I 1.</p> <p>Planned water interruption as per I 1</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. For the purpose of this indicator, property refers to only residential properties. 2. Interruptions spanning any part of the peak period are to be

IPART Indicator No.	Indicator	Definitions
	5pm-11pm)	included.
I 5	The number of properties in the water utility's drinking water supply network experiencing a water pressure failure which is occasional or recurrent, but not permanent	<p>Property as per I 1.</p> <p>A property experiences a water pressure failure if a pressure of less than 15 metres head is experienced for a continuous period of 15 minutes or more measured at the point of connection of the property and the water utility's water supply system, usually at the point of connection known as the "main tap". For the purpose of this indicator:</p> <ul style="list-style-type: none"> (a) where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property. Connected properties currently unoccupied shall be included. (b) a property is taken to have experienced a water pressure failure at each of the following times: <ul style="list-style-type: none"> (i) when a person notifies the water utility that the property has experienced a water pressure failure and that water pressure failure is confirmed by the water utility or (ii) when the water utility's systems identifies that the property has experienced a water pressure failure, (c) a property will not be taken to have experienced a water pressure failure only because of a short term operational problem (such as a main break), which is remedied within four days of its occurrence or from abnormal demand (such as demand during fire fighting).
I 6	Number of High Priority sewage overflows per 100 km of sewer main responded to in a year	<p>High Priority sewage overflow is an event assessed by the water utility as:</p> <ul style="list-style-type: none"> (a) a public health concern (b) likely to amount to significant damage to property (c) likely to have a significant environmental impact (d) an interruption of the sewerage service.
I 7	Number of Medium Priority sewage overflows per 100 km of sewer main responded to in a year	<p>Medium Priority sewage overflow is an event assessed by the water utility as likely to amount to:</p> <ul style="list-style-type: none"> (a) minor property damage (b) minor environmental impact (including unpleasant odours) not posing a significant health risk. <p>The utility has defined problem codes of 'sewerage surcharge', 'plumber confirmed choke' or 'internal surcharge'. The number of events to be used is the number recorded under these codes determined to be priority High or Medium jobs.</p> <p>Note: High Priority is equivalent to a Priority 6 for Sydney Water or Priority 1 for Hunter Water. Medium Priority is equivalent to a Priority 5 for Sydney Water or Priority 2 for Hunter Water.</p>

IPART Indicator No.	Indicator	Definitions
I 8	Number of residential customers' dwellings affected by sewer spills not contained within 1 hour of notification	<p>Residential customer means a customer who: owns real property which is used as a principal place of residence.</p> <p>Property as per I 1.</p> <p>Sewer spills refers to a sewer spill caused by a fault in the water utility's sewerage system that discharges to a customer's dwelling. It does not include spills caused by faults in the service connection or house connection branch and the house service line.</p> <p>Contained means the sewage spill has ceased or has been alleviated. It does not include sewer spills caused by faults or blockages in the customer's pipes.</p>

Environment

IPART Indicator No.	Indicator detail	Definitions
E 1	Total number of proceedings and Penalty Notices under the <i>Protection of the Environment Operations Act 1997</i> (POEO Act) issued to the water utility	<p>Proceedings refer to proceedings in connection with the POEO Act for prescribed offences.</p> <p>Penalty Notice is a notice to the effect that, if the person served with the notice does not wish to have a specified penalty offence dealt with by a court, the person may pay the penalty prescribed under section 227 for the offence.</p> <p>Note for E2-this indicator refers to penalty notices which contractors inform the water utility were incurred whilst they were conducting works for the corporation. Each breach notice will be reported on the date that the contractor informed the water utility, not on the date the penalty was incurred or the date the notice was issued to the contractor.</p>
E 2	Total number of proceedings and Penalty Notices under the POEO Act issued to contractors engaged by the water utility	
E 3	Total electricity consumption by water assets (kWh/ML of water supplied to be included)	<p>Water supplied is the total metered volume of water (potable or non-potable) supplied to customers over the reporting period plus estimated non-metered water supplied. This comprises the sum of residential water supplied, commercial, municipal and industrial water supplied and other water supplied (includes estimated non-metered water supplied). It includes recycled water and urban stormwater used but excludes agricultural irrigation, environmental water and managed aquifer recharge.</p>
E 4	Total electricity consumption by sewer assets (KWh/ML of sewage collected)	<p>Sewage treated is the total volume of sewage collected by the water utility, measured as treatment plant inflow, plus sewage treated by another business on behalf of the water utility e.g., wholesaler. This measure should equal the sum of volumes reported for residential, non-residential and non-trade waste collected and trade waste collected.</p>
E 5	Electricity consumption from renewable sources or generated by the water utility expressed as a percentage of total electricity consumption	<p>Renewable energy is electricity sourced from non-fossil fuel sources.</p>

IPART Indicator No.	Indicator detail	Definitions
E 6 (S)	Total volume of Controlled Sewage Overflows that occur in dry weather, expressed as a percentage of total sewage effluent discharged to the environment	<p>Controlled Sewage Overflow is a Sewage Overflow that is directed by Sydney Water via a designed structure to a predetermined location such as a stormwater system or waterway in order to prevent overloaded or blocked sewers from discharging at sensitive locations, on private property or within buildings thus endangering public health or causing a public nuisance.</p> <p>Sewage means untreated liquid waste received in the reticulation system (includes the wastewater from homes, offices, shops, factories and other premises discharged to the sewer).</p> <p>Sewage overflow – the discharge of untreated, diluted or partially treated sewage from the sewerage system which may occur in dry weather or in wet weather.</p> <p>Dry weather overflow means where a sewer overflow has been caused by an identified blockage in the utility's sewerage system (eg, tree root intrusion) or a system failure not related to capacity (eg, pumping station failure). It is a sewage overflow occurring when there is dry weather flow in the sewer, as determined by Sydney Water's hydraulic sewer system model.</p> <p>Effluent means sewage that has received all of the designed treatment processes at the water utility's sewage treatment plant. For this indicator, total sewage effluent discharged to the environment is inclusive of wet weather flows.</p> <p>Note: Indicator E 6 (S) is calculated as follows: $\text{Total Volume of all overflows from controlled structures as \%} = \frac{[\text{Total Volume of all overflows from controlled structures}]}{[\text{Total volume (treated effluent + overflows from control structures networks)}]}$</p>
E 7 (S)	Percentage of trade waste customers in compliance with their wastewater discharge limits as outlined in their water utility trade waste agreements	<p>Trade Waste is any waste water generated from or as a result of an industrial or commercial activity undertaken, other than at domestic or household premises.</p> <p>Note: For the purpose of this indicator, customers refers to industrial customers only, and not commercial customers.</p> <p>Trade Waste agreement means a written contract authorising discharge of trade wastewater to the water utility's sewerage system and requiring compliance with set terms and conditions.</p>
E 8	Total mass of biosolids produced by the water utility	<p>Biosolids means the stabilised organic solids derived from sewage treatment processes.</p> <p>Total Mass means the quantity in dry tonnes of biosolids captured and removed from sewage treatment plants.</p>
E 9	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated	<p>Solid Waste is any solid substance that is discarded, rejected, unwanted, in surplus or abandoned. It does not include gas, energy, water, wastewater, biosolids diverted for beneficial reuse and reuse water.</p> <p>Recycled means the conversion of waste materials into a usable product or resource. The process of recycling includes the diversion or extraction of the material from the waste stream; the collection and sorting of recyclable materials; and the processing of those materials into products which can then be used (or sold for use). Materials are deemed to have been recycled when they are transferred to a facility for processing or manufacturing (eg, a recycling centre). Energy recovery (or waste-to-energy) is</p>
E 10 (S)	Total mass of solid waste generated by the water utility	<p>Energy recovery (or waste-to-energy) is</p>

IPART Indicator No.	Indicator detail	Definitions
		<p>another form of recycling, which involves recovery of latent energy rather than a physical resource.</p> <p>Re-use is the application of a diverted waste product to a subsequent use which may be the same or different from the original purpose, and which extends the life of the product, but without further manufacture. Beneficial re-use is generally taken to mean that the form of re-use delivers some benefit (economic, social or environmental).</p>
E 11	Total area of clearing of native vegetation	Native vegetation indicators will be an estimate based on the production of the water utility's Environmental Management Plans and documents, or triggered by Flora and Fauna studies. It will only be reported above 0.01 Hectares.
E 12	Total area of native vegetation rehabilitated	The definition of Native Vegetation will be derived from the <i>Native Vegetation Act 2003</i> (NV Act). The Objects of the NV Act provide guidance as to what needs to be considered when assessing whether an area will be included in the vegetation loss figures.
E 13	Total area of native vegetation gain due to rehabilitation, replanting and protection by the water utility	Note: Indicator will include works undertaken by or on behalf of the water utility on land that is not owned by the water utility, such as offsetting impacts to one area by rehabilitation or replanting at another site.
E 14	Total number and nature of proceedings or Penalty Notices of conditions under licences issued to the water utility by NOW for water management	<p>Proceedings refers to proceedings in connection with the <i>Water Management Act 2000</i> for prescribed offences.</p> <p>Penalty notice means a notice to the effect that, if the person served with the notice does not wish to have an alleged offence dealt with by a court, the person may pay, in accordance with the notice, the penalty specified in the notice.</p> <p>NOW means the NSW Office of Water.</p>

Customers

IPART Indicator No.	Indicator detail	Definitions
C 1	The percentage of complaints resolved within 10 business days	<p>Complaint is defined in AS/ ISO 10002:2006 or the most recent update of that standard. This AS/ISO Standard defines a complaint as an expression of dissatisfaction made to an organisation, related to its products, or the complaints-handling process itself, where a response or resolution is explicitly or implicitly expected.</p> <p>The following examples are intended to provide some clarity to this definition.</p> <ul style="list-style-type: none"> – A contact requesting information is not a complaint. – A contact reporting a service difficulty or fault is not a complaint and these contacts are recorded separately. – A contact expressing dissatisfaction with repeat service difficulties and faults is a complaint. – A contact where a credit adjustment on the account has been made due to a meter misread is a complaint.

IPART Indicator No.	Indicator detail	Definitions
		<ul style="list-style-type: none"> – A contact that results in a water quality issue is a complaint (ie, due to particles, discolouration, smell, taste, or a health issue). – A contact that results from an internal sewage overflow is a complaint. – Any Civil actions taken through a court for loss or damage arising from the water utility's performance under the Customer Contract is a complaint. – Complaints regarding repeat service difficulties or faults where they are from separate customers arising from the same cause, are counted as separate complaints. – More than one complaint from the same customer arising from the same cause are reported separately. – A complaint that is registered with EWON is a corporation complaint. – A contact regarding a matter that is not the responsibility of the Corporation is not recorded as a complaint. – A contact regarding flooding the water utility's Stormwater is considered to be a complaint. <p>Resolution of a complaint means that:</p> <ul style="list-style-type: none"> a. the complaint is resolved to a customer's satisfaction, or b. the customer is provided with an explanation as to why no further action is proposed in relation to the complaint, or c. the customer is provided with a date when the issue will be resolved if the complaint is relating to future planned operational or capital works.
C 2	Percent of calls abandoned	
C 3	Percent of metered accounts of customers that receive a bill not based on a business meter read for one year	<p>Customer means any person who is taken to have entered into a Customer Contract with the water utility.</p> <p>A metered account refers to water usage metered account, which is billed based on volume. If a property has multiple meters and each metered account receives a separate bill based on a meter read, these should be reported as separate metered accounts for the purposes of this indicator. If a property has multiple meters and a single account is issued due to common ownership, the meters will also be treated as separate metered accounts for the purposes of this indicator.</p> <p>A customer meter read is one, which is provided by the customer to the utility.</p> <p>A business meter read is one taken by the utility or its contractor.</p>
C 4	The total number of residential customers disconnected for non-payment of amounts owed to the water utility	<p>Residential customer means a customer who owns real property which is used as a principal place of residence.</p> <p>Non-Residential customer means all customers not classified as a residential customer.</p> <p>Disconnection means the stopping (either temporarily or permanently) of water supply to a customer's property.</p>

IPART Indicator No.	Indicator detail	Definitions
C 5	The total number of non-residential customers disconnected for non-payment of amounts owed to the water utility	<p>Flow Restriction means a direct intervention in the water supply system by the utility in order to reduce flow to a customer's property.</p>
C 6	Total number of residential customers on whom water flow restrictions have been imposed	
C 7	Total number of non-residential customers on whom water flow restrictions have been imposed	
C 8	Number of residential customers per 1000 residential properties experiencing financial difficulty who are being assisted through the water utility's hardship program or payment plans	<p>Residential customer as per C4.</p> <p>Property means any real property to which either or both of the following conditions apply:</p> <ol style="list-style-type: none"> the real property is connected to the water utility's drinking water supply system, sewerage system or recycled water system and a charge for the services provided by one or more of those systems is levied on the owner of the real property, the real property is within a declared stormwater drainage area for which the water utility imposes a stormwater charge upon the owner of real property in that area. <p>Payment plan is a plan for a residential customer experiencing payment difficulties to pay a retailer by periodic instalments, any amount payable by the customer. A payment plan must only include an arrangement in which the customer is paying off an arrears component (of any overdue amount) and must consist of at least three instalments.</p>
C 9	<p>Percentage of residential customers in C 8 who are:</p> <ol style="list-style-type: none"> not meeting ongoing water and sewerage costs (debt increasing) covering ongoing water and sewerage costs (debt stable) covering ongoing costs and portion of arrears (debt reducing) 	<p>Residential customer as per C4.</p>

IPART Indicator No.	Indicator detail	Definitions
C 10	Percentage of residential customers in C 8 who pay by: (a) Payment plan (b) Centrepay	Residential Customer as per C 4. Payment plan as per C 8. Centrepay is a service offered by Centrelink that allows customers to pay their water bills by having an amount deducted from their Centrelink payments and paid directly to the water utility.
C 11	Break up by percentage of residential customers who no longer meet C 8 by exiting the water utility's hardship program or payment plans because: (a) they have paid off their outstanding debt (b) they have been flow restricted (c) other	Flow restriction as per C 4.

Source: IPART, *Reporting Manual for Sydney Water Corporation*, June 2013, Appendix C-E.

Glossary

5-year EMP 2010 Plan	5-year Environmental Management Plan NSW Office of Water, <i>2010 Metropolitan Water Plan: Water for people and water for the environment, August 2010</i>
ADWG	Australian Drinking Water Guidelines
AGWR	Australian Guidelines for Water Recycling
AHMC	Australian Health Ministerial Council
AMS	Asset Management System
CBA	Cost benefit analysis
DECCW	Department of Environment, Climate Change and Water
DWQMP	Drinking Water Quality Management Plan
EMS	Environmental Management System
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	Environmental Protection Authority
EPHC	Environment Protection and Heritage Council
EPL	Environmental Protection Licence
Fluoridation Code	NSW Code of Practice for Fluoridation of Public Water Supplies (2011)

Framework	Framework for Management of Drinking Water Quality
Hunter Water	Hunter Water Corporation
IPART	Independent Pricing and Regulatory Tribunal
ISO 55001:2014	International Standard for Asset Management ISO 55001:2014
MOU	Memorandum of Understanding
MWD	Metropolitan Water Directorate
NOW	NSW Office of Water
NWI	National Water Initiative
Operating licence	Sydney Water's operating licence issued under Section 12 of <i>Sydney Water Act 1994</i>
POEO Act	<i>Protection of the Environmental Operations Act 1997</i>
PSP	Priority Sewerage Program
QMS	Quality Management System
RWQMS	Recycled Water Quality Management System
SCA	Sydney Catchment Authority
SOC	State Owned Corporation
SPS	System Performance Standard
State Water	State Water Corporation
Sydney Water	Sydney Water Corporation
The Act	<i>Sydney Water Act 1994</i>
The Guidelines	Australian Guidelines for Water Recycling and Australian Drinking Water Guidelines

The Minister	The Minister for Natural Resources, Lands and Water - Sydney Water's portfolio Minister
AS/NZS ISO 14001:	AS/NZS ISO 14001:2004 Environmental Management Systems - Requirements with guidance for use, 2004
Water Sharing Plan	Water Sharing Plan for the Greater Metropolitan Region Unregulated Water Sources 2011
WICA	<i>Water Industry Competition Act 2006</i>
WIC Act	<i>Water Industry Competition Act 2006</i>
WQMS	Water Quality Management System