

Independent Pricing and Regulatory Tribunal
New South Wales

Review of the Sydney Water Corporation Operating Licence 2015-2020

Draft Report

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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 15 February 2019

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 mail to:

Review of the Sydney Water Corporation Operating Licence

Independent Pricing and Regulatory Tribunal

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

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Executive Summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is undertaking an end-of-term review of the Sydney Water Corporation (Sydney Water) Operating Licence 2015-2020 (the existing licence). The term of existing licence does not end until 30 June 2020, but we have brought this review forward by one year at Sydney Water's request, to avoid it coinciding with our review of Sydney Water's prices in 2019-20.¹ We expect the proposed licence to apply from 1 July 2019.

This report outlines our draft recommendations and proposed licence clauses, explains how and why we made those recommendations, and seeks submissions from stakeholders. We will consider all submissions before making our final recommendations to the Minister for Energy and Utilities in April 2019.

1.1 Overview of our proposed changes to Sydney Water's licence

We have made 77 draft recommendations to amend the existing licence to address issues identified by us and by stakeholders who provided submissions to our Issues Paper.

We have identified new requirements where we consider licensing is appropriate to address emerging issues. In particular, we have made draft recommendations to require Sydney Water to:

- ▼ participate in and support water planning for Greater Sydney by sharing plans and information with the Government
- ▼ address areas of recurring low water pressure
- ▼ provide water and wastewater services to *Water Industry Competition Act 2006* (WIC Act) licensees on request, provide specific information to the market and negotiate in good faith with potential competitors to reduce non-price barriers of entry to the market, and
- ▼ develop and implement a family violence policy to support vulnerable customers.

We have also identified opportunities to amend the existing requirements where we consider the licence can improve on its design and administration to achieve the same or better regulatory outcomes. Most significantly, we have made draft recommendations to:

- ▼ optimise the water continuity standard to reflect the value that customers place on the level of service for unplanned interruptions to water supply, we also propose changing from a maximum threshold to a target with a tolerance band
- ▼ change the definition of the duration of water pressure failure from 15 minutes to one hour to reflect customers' preferences that a short duration event of low water pressure is not important

¹ We supported this request, and the Minister of Energy and Utilities had no objection; Letter to IPART, The Hon. Don Harwin, MLC, Minister for Energy and Utilities, 22 February 2018.

- ▼ change the way the measure of performance standards is expressed so that the standards allow for the effect of growth and development in Sydney
- ▼ allow flexibility for Sydney Water to use another economic method to determine the level of water conservation
- ▼ amend the Customer Contract to clarify customer protection clauses that apply to tenants and change the rebates to reflect the extent of inconvenience to customers
- ▼ remove the prescriptive requirements for the composition of the Customer Council, and
- ▼ require Sydney Water to publish a map of its area of operations.

In addition, we have identified opportunities to remove existing requirements from the licence where we consider these requirements are no longer the best response to address the risk or issue. We have made draft recommendations to:

- ▼ remove the requirement to maintain, implement and certify an Environmental Management System (EMS) because the Environment Protection Agency already provides a financial incentive for Sydney Water to maintain a certified EMS
- ▼ remove the requirement to maintain, implement and certify a Quality Management System (QMS) because it duplicates functions of other clauses in the licence to achieve quality products and services, and
- ▼ remove the requirement to report on response times for water main breaks and leaks because these indicators do not reflect the time taken to restore supply to customers and appear to be of low public interest and we are comprehensively addressing water conservation through other obligations.

1.2 How we approached this review

For this licence review, we are conducting a public consultation process, and applying our *Best Practice Licensing Framework* (discussed further in section 2.4). This framework involves four stages, which answer the following key questions:

1. Is licensing appropriate?
2. Is the licence well designed?
3. Is the licence administered effectively and efficiently?
4. Is licensing the best response?²

As the first step of this approach, we assessed the existing licence and the associated reporting manual by applying the first three stages of the framework, to form our preliminary views. We released an Issues Paper in June 2018 that explained these views and sought stakeholder feedback. We received 15 submissions from the following stakeholders:

- ▼ A sub-group of members from the Australian Water Association's Water Efficiency Specialist Network (AWA-WESN)
- ▼ City of Sydney Council (City of Sydney)

² IPART, *A best practice approach to designing and reviewing licensing schemes*, prepared by PricewaterhouseCoopers, March 2013.

- ▼ Critical Infrastructure Centre, Department of Home Affairs (CIC)
- ▼ Energy and Water Ombudsman (EWON)
- ▼ Flow Systems Pty Ltd (Flow Systems)
- ▼ Hunter Water Corporation (Hunter Water)
- ▼ Institute for Culture and Society at Western Sydney University (ICS)
- ▼ Institute for Sustainable Futures at the University of Technology Sydney (ISF)
- ▼ Northern Beaches Council
- ▼ NSW Government, including comments from the Department of Planning and Environment (DPE), Environmental Protection Authority (EPA), Fire and Rescue NSW (FRNSW), Office of Environment and Heritage (OEH), and the Office of Emergency Management (OEM)
- ▼ Open Cities
- ▼ Public Interest Advocacy Centre (PIAC)
- ▼ Scotland Island Residents Association (SIRA)
- ▼ Sydney Water
- ▼ Total Environmental Centre (TEC).

As the second step, we considered all these submissions and undertook further analysis to form the proposed positions and draft recommendations on the amended licence and reporting manual. In particular, we:

1. Considered stakeholder views to determine potential licence obligations and reporting requirements.
2. Applied the fourth stage of our *Best Practice Licensing Framework* to existing clauses that had satisfied the first three stages of the framework (refer to our Issues Paper), by using cost-benefit analysis on the proposed licence obligations to assess whether licensing is still the best response.
3. Applied all four stages of our *Best Practice Licensing Framework* to proposed new licence clauses to ensure licensing is the best response.

This draft report explains our proposed positions and why we reached these positions and sets out our draft recommendations. Appendix A of the report presents the findings of our cost-benefit analysis. We have also prepared a draft amended licence, draft customer contract, and draft reporting manual that reflect our draft recommendations. All these documents are available on our website.

In the final step of our approach, we will consider all the feedback that we receive in response to this draft report and other draft documents before finalising our recommendations to the Minister.

1.3 How you can have your say

We are now seeking stakeholder feedback on this draft report, and on the draft amended licence, draft customer contract and draft reporting manual. We invite all interested parties to make a written submission by Friday 15 February 2019. Information on how to make a submission is provided on page iii (at the front of this report).

To provide stakeholders with another opportunity to provide input, we will hold a public workshop in Sydney on Tuesday 5 February 2019. More details about this workshop will be available on our website closer to this date.

1.4 Structure of this draft report

The rest of this draft report provides more information about the review, and then discusses our proposed positions and draft recommendations, the analysis that underpins them, and our consideration of stakeholder comments:

- ▼ Chapter 2 explains the context for the review, including the role of Sydney Water's licence and how we are applying the *Best Practice Licensing Framework* as part of our approach for this review.
- ▼ Chapter 3 sets out our proposed new structure for the amended licence.
- ▼ Chapters 4 to 13 discuss the stakeholder views, our proposed recommendations and cost-benefit analysis for the proposed licence. These parts are:
 - licence context
 - licence authorisation
 - water conservation and planning
 - performance standards for water quality
 - performance standards for service interruptions
 - asset management system
 - customers and consumers
 - stakeholder cooperation
 - information and services for competitors, and
 - performance monitoring and reporting.

1.5 List of draft recommendations in this draft report

For your convenience, a complete list of our draft recommendations is provided below. You are welcome to respond to any or all of these recommendations.

Licence structure

- | | | |
|---|--|----|
| 1 | Amend the licence structure as shown in Table 3.1. | 18 |
|---|--|----|

Licence context

- | | | |
|----|---|----|
| 2 | Amend the licence objective so that it is outcomes-based and aligns with Sydney Water's objectives under the Act. | 22 |
| 3 | Not include requirements to manage critical infrastructure in the amended licence. | 24 |
| 4 | Clarify in the licence that Sydney Water is regulated under the <i>Security of Critical Infrastructure Act 2018</i> (Cth) and its obligations under that Act take precedence over the obligations in the licence where there is any inconsistency between them. | 24 |
| 5 | Amend the area of operations schedule to refer to the Act, and require Sydney Water to publish a map of its area of operations within 30 days of licence commencement, and make any required updates to the area of operations within 30 days of any change. | 26 |
| 6 | Adopt a 4-year licence term from the Commencement Date. | 28 |
| 7 | Retain the existing licence amendment provisions in the amended licence. | 29 |
| 8 | Retain the existing non-exclusive licence and availability of licence clauses. | 29 |
| 9 | Retain the existing pricing obligation in the amended licence. | 30 |
| 10 | Amend the existing clauses on the end of term review of the licence to specify IPART as the person who will undertake the review. | 31 |
| 11 | Amend the notices obligations of the licence to provide that notices under the amended licence must be approved by the Managing Director of Sydney Water or the CEO of IPART and may be sent electronically, unless otherwise specified in the licence or reporting manual. | 32 |

Licence authorisation

- | | | |
|----|---|----|
| 12 | Amend the licence authorisation and stormwater drainage clauses to clearly differentiate between the 'required' and the 'permitted' functions of Sydney Water relating to the stormwater drainage systems. | 34 |
| 13 | Sydney Water can apply integrated water cycle management under the amended licence but is not required to do so. | 35 |
| 14 | Sydney Water can adopt measures to address waterway health and liveability outcomes under the amended licence but it is not required to do so. Include a note in the amended licence to clarify Sydney Water's role in stormwater management. | 36 |

-
- 15 Include an obligation to provide water and sewerage services to a WIC Act licensee on request from the WIC Act licensee, and allow Sydney Water to impose conditions to ensure safe, reliable and financially viable services. 37

Water conservation and planning

- 16 Maintain the requirement for Sydney Water to use the approved economic level of water conservation method to assess water conservation options but also provide flexibility for it to use another economic method that has been approved by IPART. 40
- 17 Retain the requirement for Sydney Water to notify IPART and obtain IPART's approval for any significant changes it proposes to make to the economic level of water conservation method, and amend this requirement so it also applies to any other economic method we have previously approved. 41
- 18 Amend the licence to include an obligation for Sydney Water to review its ELWC method, including stakeholder consultation, by 30 September 2020. 43
- 19 Amend the licence to require Sydney Water to publish on its website the ELWC method or another economic method approved by IPART, a plain English summary of the method, and the economic level of water conservation expressed as the quantity of water savings in megalitres per day. 44
- 20 Amend the reporting manual to include a performance indicator for water conservation, as the level of water usage expressed as litres per capita per day. 44
- 21 Remove the requirements for Sydney Water to develop an economic level of water conservation method, and transition from fixed targets for water usage and water leakage. 45
- 22 Amend the licence to include a new requirement for Sydney Water to use its best endeavours to participate cooperatively in urban water planning and policy processes for Greater Sydney. 47
- 23 Amend the licence to include new requirements for Sydney Water to develop and submit to the portfolio Minister by December 2020, a long-term capital and operational plan and a drought response plan, and to use its best endeavours to develop these plans as joint plans in cooperation with WaterNSW. 47
- 24 Amend the licence to include a new requirement for Sydney Water to develop and enter into a data sharing agreement with DPE by 30 June 2020 (or another date approved by IPART). 47
- 25 Retain the existing Priority Sewerage Program obligations. 49
- 26 Retain the list of areas and update the estimated number of lots in the Priority Sewerage Program shown in Schedule 3 of the existing licence. 49

Performance standards for water quality

- 27 Retain the existing clauses on maintaining management systems consistent with the *Australian Drinking Water Guidelines*. 53
- 28 Retain the existing clauses on maintaining management systems consistent with the *Australian Guidelines for Water Recycling*. 53
- 29 Expand the definition of *Australian Guidelines for Water Recycling* in the amended licence to include all volumes. 55
- 30 Remove the existing clauses on obtaining NSW Health's approval for any significant changes that Sydney Water proposes to make to the Drinking Water Quality Management Sydney and the Recycled Water Quality Management Systems, as the licence does not preclude Sydney Water from engaging with NSW Health on these changes. 55
- 31 Remove the existing clauses in the licence on notifying IPART and NSW Health of any proposed significant changes to the Drinking Water Quality Management System and the Recycled Water Quality Management System, as Sydney Water is already required to do so in the reporting manual. 56
- 32 Retain the existing clause in the licence on complying with the *Fluoridation Code*, and add a clause to clarify that NSW Health can specify different requirements to those in the *Fluoridation Code*. 57
- 33 Remove the completed clause which required Sydney Water to review its public reporting on drinking water quality. 57
- 34 Move Appendix B (Drinking Water health and aesthetic water characteristics and raw water operational monitoring characteristics) in the existing reporting manual to a reporting schedule in the Drinking Water Quality Management System. 58

Performance standards for service interruptions

- 35 Express the measure of performance as the number of properties that meet the standard per 10,000 properties. 62
- 36 Retain the interpretation of system performance standards clause, where IPART's interpretation of the system performance standards will prevail if there were ambiguity in the interpretation or application of any system performance standards. 62
- 37 Amend the water continuity standard to set a target level and a tolerance band for single event unplanned water interruptions that last for more than five continuous hours. 65
- 38 Set the target level for the water continuity standard to 9,840 properties per 10,000 properties that do not experience unplanned water interruptions that each lasts for more than five continuous hours. 65

- 39 Set the tolerance band for the water continuity standard to +/- 40 properties, which equates to a lower bound of 9,800 properties per 10,000 properties, and an upper bound of 9,880 properties per 10,000 properties that are unaffected by unplanned water interruptions that each lasts for five or more continuous hours. 65
- 40 Remove the repeat event measure from the water continuity standard, but maintain the repeat event measure as an IPART performance indicator to monitor the trend on multiple interruption events. 67
- 41 Amend the threshold level of the water pressure standard to no more than 130 properties that experience 12 or more water pressure failures per year (water pressure failures can be counted once for each property per day), and amend the expression of measure to 9,999 properties per 10,000 properties that do not experience 12 or more water pressure failures per year. 70
- 42 Amend the definition of water pressure failure to a situation in which a Property experiences a pressure of less than 15 metres head of pressure for a continuous period of one hour or more, such head of pressure measured at the point of connection (usually the main tap) of the Property to Sydney Water's Drinking Water supply system. 70
- 43 Include new obligation to address the service provided to clusters of properties affected by recurring low water pressure in a manner that takes into account its customers' willingness to pay by 31 October 2022. 70
- 44 Include new obligation to review business processes by 30 June 2020 to ensure that no new property at risk of being affected by recurring low water pressure is connected to the drinking water supply unless the owner is informed of the low water pressure and provided with options to avoid the risk of low water pressure. 71
- 45 Retain the threshold levels (for both single and multiple events) for the wastewater overflow standard, but amend the expression of measure to 9,928 properties per 10,000 properties that do not experience an uncontrolled wastewater overflow in dry-weather, and 9,999 properties per 10,000 properties that do not experience three or more uncontrolled wastewater overflows in dry-weather. 75
- 46 Continue to exclude public properties from the wastewater overflow standard. 75

Asset management system

- 47 Retain the requirement to maintain an Asset Management System and: 77
- replace references to the International Standard with the Australian Standard 77
 - remove the obligation to certify AMS, and 77
 - remove the obligation to report to IPART on significant changes that Sydney Water proposes to make to the AMS. 77
- 48 Replace the reporting of the biennial State of the Assets Report with a one off Strategic Asset Management Plan by 1 September 2019 or another date approved by IPART. 77

- | | | |
|----|--|----|
| 49 | Remove the requirement to maintain and certify an Environmental Management System because Sydney Water would maintain an Environmental Management System through its environmental regulatory instruments. | 79 |
| 50 | Remove the requirement to maintain and certify a Quality Management System, as it duplicates the functions of other clauses in the amended licence, which should not reduce the performance of Sydney Water. | 80 |

Customers and consumers

- | | | |
|----|---|----|
| 51 | Retain the existing Customer Contract licence clauses. | 82 |
| 52 | Amend definition of customer in the Customer Contract to specifically include that tenants will be taken as a customer for the purposes of: | 82 |
| | – accessing payment difficulty and assistance (for private residential tenants) | 82 |
| | – complaints and disputes | 82 |
| | – consultation, access to information and privacy, and | 82 |
| | – termination and variations of the Customer Contract. | 82 |
| 53 | Adopt the rebates proposed by Sydney Water in the Customer Contract. | 84 |
| 54 | Amend customer information obligations to require Sydney Water to: | 87 |
| | – publish information on its website | 87 |
| | – publish information in a manner that is likely to come to the attention of the public, and/or | 87 |
| | – provide information directly to customers on request. | 87 |
| 55 | Retain the existing customer protection obligations for payment difficulties and payment assistance. | 90 |
| 56 | Require Sydney Water to develop and implement a family violence policy by 1 July 2020, that includes: | 91 |
| | – protecting private and confidential customer information | 91 |
| | – facilitating access to payment difficulty programs | 91 |
| | – minimising the need for customers to disclose information such as, family violence repeatedly, and | 91 |
| | – making customer referrals to specialist services. | 91 |
| 57 | Require Sydney Water to have a Customer Council that meets the requirements of the Act. | 94 |
| 58 | Remove the prescriptive clauses related to the Customer Council. | 95 |
| 59 | Include a new clause requiring Sydney Water to: | 95 |

- review the existing Customer Council by 30 June 2020 to enable Sydney Water to engage with customers in ways that are relevant, representative, proportionate, objective, clearly communicated and accurate, and 95
 - report on the review process and outcomes by 30 June 2020 to IPART. 95
- 60 Retain the existing internal complaints handling and external dispute resolution scheme obligations, with an amendment to replace the obligation for Sydney Water to describe EWON's operations with an obligation to list the services provided by EWON. 96

Stakeholder cooperation

- 61 Retain obligations requiring MOUs with EPA and WAMC. 99
- 62 Retain the obligation requiring an MOU with NSW Health, but remove the requirement for the MOU to include arrangements for reporting to NSW Health information on any events that may pose a risk to public health. 99
- 63 Retain the MOU obligations with FRNSW, including the matters that the working group must consider. 101
- 64 Remove the completed clause on the development of an MOU with FRNSW by 31 December 2015. 101
- 65 Do not require Sydney Water to report to IPART on working group matters. 101
- 66 Do not require Sydney Water to enter into an MOU with NSW RFS. 101
- 67 Remove the requirements to develop and maintain a Roles and Responsibility Protocol with DPE. 102

Information and services for competitors

- 68 Include an obligation on Sydney Water to negotiate with WIC Act licensees and potential competitors in good faith. 107
- 69 Not to specify the form of dispute resolution in the licence where WIC Act licensees and potential competitors are unable to negotiate an agreement. 107
- 70 Require Sydney Water to publish information on its website, by 30 June 2020, and update at least every 12 months, its short to medium term (at least ten years) servicing information for each region, development or major system, which as a minimum, include information on: 109
- current and projected demand 109
 - current and projected capacity constraints 109
 - indicative cost of servicing 109
 - locations where further investigation is needed 109
 - opportunities to investigate servicing options, and 109
 - the assumptions made in developing the servicing information. 109

71	Include in the reporting manual a requirement for Sydney Water to report annually on the following and make this report publicly available:	111
	– number of agreements established with WIC Act licensees and potential competitors	111
	– number of negotiations commenced with WIC Act licensees and potential competitors that did not eventuate in an agreement and the reasons for this outcome	111
	– type of information requested by WIC Act licensees and potential competitors in addition to information that is publicly available, and	111
	– time taken for Sydney Water to respond to requests for provision of information or services.	111
72	Amend the ‘code of conduct’ licence clause to refer to the licence issued under the WIC Act rather than the WIC Regulation.	111

Performance monitoring and reporting

73	Retain the existing clauses on operational audits in the amended licence.	115
74	Retain and consolidate the existing obligations on reporting in the amended licence.	116
75	Retain the requirement for Sydney Water to compile and report on environment performance indicators.	118
76	Retain the existing environment performance indicators in the Sydney Water reporting manual.	118
77	Remove the obligation to report on response times for water main breaks and leaks as we are comprehensively addressing water conservation through other obligations.	120

2 Review context

To help stakeholders understand the context to this review and the approach we are taking to make our decisions and final recommendations, the following sections discuss:

- ▼ Sydney Water's role
- ▼ Sydney Water's licence
- ▼ Sydney Water's broader regulatory environment, and
- ▼ our application of the Best Practice Licensing Framework as part of our approach for this review.

2.1 Sydney Water's role

Sydney Water is a public water utility, which serves a population of over five million in the Sydney, Illawarra and the Blue Mountains regions. It does not manage bulk water supply or the catchment areas. It sources its water from WaterNSW, and when required, from the Sydney Desalination Plant Pty Ltd.

Sydney Water is a statutory State Owned Corporation, wholly owned by the NSW Government. Its principal functions are to provide, construct, operate, manage or maintain systems or services for:

- ▼ storing or supplying water
- ▼ providing sewerage services
- ▼ providing stormwater drainage systems, and
- ▼ disposing of waste water.³

Sydney Water's principal objectives are prescribed by the *State Owned Corporations Act 1989* and the *Sydney Water Act 1994* (the Act), and 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 the Corporation, and
 - to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates,
- ▼ protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development contained in section 6(2) the *Protection of the Environment Administration Act 1991*, and
- ▼ 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.⁴

³ *Sydney Water Act 1994*, s 12.

⁴ *Sydney Water Act 1994*, s 21(1).

In implementing these objectives, Sydney Water has the following special objectives:

- ▼ to reduce risks to human health, and
- ▼ to prevent the degradation of the environment.⁵

2.2 Sydney Water's licence

The Act establishes Sydney Water. It specifies that Sydney Water can only carry out certain functions under the authority of, and in accordance with, an operating licence. A licence is a regulatory instrument that authorises and/or requires a water utility to carry out its functions.

The Act also specifies that the licence must include terms and conditions under which Sydney Water is required to:

- ▼ provide, construct, operate, manage and maintain efficient, co-ordinated and commercial viable systems and services for supplying water, providing sewerage services and disposing of waste water
- ▼ provide, operate, manage and maintain a stormwater drainage system
- ▼ ensure that the systems and services meet the quality and performance standards specified in the licence on water quality, service interruptions, pricing and other matters determined by the Governor and set out in the licence, and
- ▼ compile indicators that directly impact on the environment of Sydney Water's activities:
 - to enable preparation of an annual report on Sydney Water's performance, and
 - to provide information for a year to year comparison on Sydney Water's performance in this area.⁶

The licence must also provide for a schedule that details the area of operations, the preparation of an operational audit, establishment and consultation with Customer Councils, reference to memoranda of understanding and terms and conditions of customer contracts.⁷

IPART issues a reporting manual that contains reporting requirements, such as details of report content, due dates and recipients of the reports. The licence requires Sydney Water to comply with its reporting obligations in the reporting manual.⁸ This means that a non-compliance with an obligation in the reporting manual is a non-compliance with a licence condition.

A licence is subject to a compliance monitoring regime, with penalties applicable for contravention. A licence is a more flexible regulatory instrument than legislation, and allows for regular review. Regular reviews ensure the licence remains current and reflects changes in public expectations, best practice and changing circumstances.

IPART is responsible for conducting these reviews. At the end of this current review, we intend to make recommendations to the Minister to amend the licence under section 16 of the

⁵ *Sydney Water Act 1994*, s 22(1).

⁶ *Sydney Water Act 1994*, s 14(1).

⁷ *Sydney Water Act 1994*, ss 10(1), 14(2), 15(1), 34, 35, 54(1) and 54(3).

⁸ Sydney Water Corporation Operating Licence 2015-2020, cl. 8.2.1

Act. The Minister may accept or reject our recommendations. The Minister may endorse the amended licence for approval by the Governor of NSW.

2.3 Sydney Water's regulatory environment

It is important to understand Sydney Water's broader regulatory environment, so we can identify potential regulatory duplications or gaps in the licence. For example, the licence may not need to address a particular issue if another regulatory mechanism already does so. However, it may need to include obligations to address an issue if there is a regulatory gap.

Sydney Water is governed principally by the Act and the *State Owned Corporations Act 1989*. However, it has additional obligations under various NSW and Commonwealth legislation and guidelines, including obligations relating to public health, environment and planning, competition and consumer protection and critical infrastructure.

Sydney Water has multiple state and national regulators. In NSW, IPART regulates Sydney Water's compliance with its licence, and sets maximum prices that Sydney Water may charge for its monopoly services. Some other NSW regulators, to name a few, include:

- ▼ NSW Health
- ▼ EPA
- ▼ Department of Industry – Water
- ▼ DPE, and
- ▼ OEH.

Sydney Water is also regulated by the Australian Competition and Consumer Commission (ACCC) whose role is to enforce the *Competition and Consumer Act 2010* (Cth) including the *Australian Consumer Law* and promote competition, fair trading and regulating national infrastructure for the benefit of all Australians. The *Australian Consumer Law* (in Schedule 2 of the *Competition and Consumer Act 2010* (Cth)) provides protections for consumers (within the meaning of that law) which apply across most sectors of the economy, including on the services supplied by Sydney Water.

2.4 Our application of the Best Practice Licensing Framework for this review

As Chapter 1 discussed, a key part of our approach for this review is to apply the Best Practice Licensing Framework.⁹ This framework involves four stages:

1. Considering whether licensing is appropriate.
2. Assessing whether the existing licence is well designed.
3. Assessing whether the existing licence is administered effectively and efficiently.
4. Confirming that licensing is the best response when comparing its costs and benefits against other options.

⁹ IPART, *A best practice approach to designing and reviewing licensing schemes*, prepared by PricewaterhouseCoopers, March 2013.

The Best Practice Licensing Framework was developed in 2013 as an assessment tool to both existing and proposed licensing schemes based on best practice principles. We consider the framework appropriate for the Sydney Water licence review. We have applied the framework as a guide to determine whether introducing an obligation in Sydney Water's proposed licence is the best response to address a problem or risk. We have also considered stakeholder's views as inputs to our proposed positions and draft recommendations. We have applied the framework flexibly depending on the nature of the problem or risk. In some instances, we have deviated from the framework because we consider stakeholder's views are reasonable to adopt in the context of the regulatory environment. In such cases we provide explanation in the relevant sections of this draft report.

We applied Stages 1 to 3 to the existing licence clauses to form our preliminary views, then set out these views in our Issues Paper and sought stakeholder comment. We then considered stakeholder comments and applied Stages 1 to 3 to proposed new licence clauses and Stage 4 to all existing and new or amended licence clauses to form the draft recommendations set out in this draft report. The sections below provide more information on each stage of the framework.

2.4.1 Stage 1 – considering whether licensing is appropriate

In Stage 1, we considered both the existing and proposed obligations, using a pragmatic approach. Where an existing obligation *must be* included in the licence due to a legislative requirement, we found that it is appropriate and moved on to Stage 2. Where an existing or proposed obligation *may be* included or is *not required* to be included under legislation, we considered whether a licence obligation is necessary and appropriate to address the specific problem or risk the obligation relates to. One of the key questions we asked was whether the same outcome would be achieved in the absence of a licence obligation.

2.4.2 Stage 2 – considering whether the licence is well designed

We applied Stage 2 to existing and proposed obligations. For each obligation, we considered whether it meets the principles of a well-designed licence, which are that it:

- ▼ is outcome-focused rather than prescriptive
- ▼ is proportionate to the problem or risk being addressed
- ▼ does not duplicate other existing regulatory requirements, and
- ▼ requires only the minimum necessary reporting.

We also considered information from:

- ▼ previous operational audits of Sydney Water, including its compliance with its existing licence obligations
- ▼ information from other recent licence reviews, including our 2017 reviews of the Hunter Water and WaterNSW licences, and
- ▼ where relevant, examples of current good or best practice in the regulation and operation of utilities, in Australia and other countries.

2.4.3 Stage 3 – considering whether the licence can be administered effectively and efficiently

We applied Stage 3 to the existing and proposed licence obligations. After applying our risk-based compliance monitoring approach, we found that all the existing licence obligations can be, and are, administered effectively and efficiently.¹⁰ In general, we audit licence clauses that are high risk with low level of compliance more frequently (eg, every year) than those that are low risk with high level of compliance (eg, once in the term of the licence). We also rely on Sydney Water's annual statement of compliance to determine whether we undertake an audit of some of the clauses.

When we audit a management system, such as an asset management system (AMS) that has been certified by a third party, we generally accept surveillance/certification reports from AMS-specialist auditors rather than including an audit of the AMS in our audit scope. This allows us to minimise duplication and the burden on Sydney Water.¹¹

Where the licence obligations require Sydney Water to cooperate with certain government agencies, we monitor compliance through direct annual contact with NSW Health, EPA and WAMC¹² to provide feedback on Sydney Water's performance.

We implement continuous improvement based on our internal reviews and by seeking feedback from Sydney Water and our independent auditors at the end of each audit. We also have our *Audit Guideline – Public Water Utilities* which sets our expectations regarding the conduct of operational audits, and we update it regularly.

2.4.4 Stage 4 – confirming that licensing is the best response


Stage 4 involved conducting cost-benefit analysis to confirm that licensing is the best response. Where we found, in the previous stages, that a licence obligation was necessary and appropriate to address a problem or risk, we analysed different approaches to address that problem or risk.

We have considered the most appropriate approach to conducting the cost-benefit analysis in the context of each licence obligation. Therefore, we have used several approaches, tailored to each licence condition. The mix of approaches that we have applied include a standard

¹⁰ Our approach to compliance is detailed in our Compliance and Enforcement Policy, December 2017.

¹¹ IPART, *Audit Guideline – Public Water Utilities*, June 2018.

¹² We contact the Department of Industry – Water, which undertakes water resource management activities on behalf of WAMC.



comparison (quantitative or qualitative) of estimated costs and benefits, economically optimising the level of standards, and drawing on other relevant cost-benefit analysis to inform our decision.

We have summarised our analysis in a separate cost-benefit analysis report, which is provided as Appendix A. Some of the obligations included in our proposed licence are not discussed in the cost-benefit analysis report. This is either because we judged that a cost-benefit analysis of the obligation was not required, or that the cost-benefit analysis was very straightforward. In these cases, our reasoning is set out in this draft report.

3 Licence structure

As the first step of our approach for this review, we considered the structure of the existing licence to assess whether it promotes transparency of Sydney Water's operations and ease of use.

We found that this structure does not provide stakeholders with a clear view of the scope of Sydney Water's operational activities, the existing clauses could be grouped and sequenced more logically.

Therefore, our preliminary view in the Issues Paper was to change the structure so it better aligns with Sydney Water's operational activities, and groups and sequences licence clauses more logically. We also set out a preliminary structure for the amended licence.

Five of the stakeholders who made submissions in response to our Issues Paper commented on the licence structure – including Sydney Water, Hunter Water, EPA, FRNSW, and PIAC. All supported our preliminary structure. FRNSW also noted that consistency with other large public water utilities' licences could enable meaning comparison of standards and performance across the water utilities.

For this draft report, we have largely retained our preliminary structure. However, we propose some further amendments to provide greater clarity and improve readability. Specifically, we propose to:

- ▼ separate the licence context clauses from the licence authorisation clauses
- ▼ separate the performance standards for water quality from the performance standards for service interruptions (ie, system performance standards)
- ▼ remove the licence part on management systems and bringing the asset management clause into the part on performance standards for service interruptions, and
- ▼ split the customer and stakeholder relations part of the licence into three parts – customer and consumers, stakeholder cooperation, and information and services for competitors.

Table 3.1 sets out our proposed structure for the draft amended licence, and indicates where the existing licence clauses would fit within this structure.

We consider this proposed licence structure has the following benefits:

- ▼ makes it easier for stakeholders to locate licence clauses relevant to them and to understand Sydney Water's operations, and
- ▼ improves the efficiency and effectiveness of compliance and compliance monitoring for Sydney Water and IPART.

Draft recommendation

- 1 Amend the licence structure as shown in Table 3.1.

Table 3.1 Proposed licence (2019-2023) structure and corresponding existing licence (2015-2020) clauses

Proposed licence (2019-2023) structure		Corresponding existing licence (2015-2020) clauses
Licence Context	<ul style="list-style-type: none"> ▼ Objective ▼ Security of critical infrastructure ▼ Area of operations ▼ Term ▼ Licence amendment ▼ Non-exclusive licence ▼ Availability of licence ▼ Pricing ▼ End of term review ▼ Notices 	<p>Clause 1.1</p> <p>Clauses 1.4 – 1.5</p> <p>Clauses 1.7 – 1.9</p> <p>Clause 10.1</p> <p>All of Part 11</p>
Licence Authorisation	<ul style="list-style-type: none"> ▼ Licence authorisation ▼ Obligation to make services available 	<p>Clauses 1.2 – 1.3</p> <p>Clause 1.6</p>
Water Conservation and Planning	<ul style="list-style-type: none"> ▼ Economic approach to water conservation ▼ Water planning ▼ Priority Sewerage Program 	<p>All of Part 3</p> <p>Clause 4.4</p>
Performance Standards for Water Quality	<ul style="list-style-type: none"> ▼ Drinking water ▼ Recycled water ▼ Fluoridation Code 	All of Part 2
Performance Standards for Service Interruptions	<ul style="list-style-type: none"> ▼ Water Continuity Standard ▼ Water Pressure Standard ▼ Wastewater Overflow Standard 	Clauses 4.1 – 4.3
Customers and Consumers	<ul style="list-style-type: none"> ▼ Customer Contract ▼ Providing information to customers ▼ Consumers ▼ Assistance options and payment difficulties and actions for non-payment ▼ Family violence policy ▼ Customer Council ▼ Internal complaints handling ▼ External dispute resolution scheme 	Clauses 5.1 – 5.7
Stakeholder Cooperation	<ul style="list-style-type: none"> ▼ Memoranda of Understanding 	All of Part 9
Information and Services for Competitors	<ul style="list-style-type: none"> ▼ Negotiations with WIC Act licensees and potential competitors ▼ Provision of information to WIC Act competitors and potential competitors ▼ Code of Conduct 	Clause 5.8
Performance Monitoring and Reporting	<ul style="list-style-type: none"> ▼ Operational audits ▼ Provision of information for performance reporting ▼ Reporting 	<p>Clause 6.2</p> <p>All of Part 8</p>
Definitions and Interpretation	<ul style="list-style-type: none"> ▼ Definitions ▼ Interpretation 	All of Part 12
Schedules	<ul style="list-style-type: none"> ▼ Area of operations ▼ Priority Sewerage Program ▼ Customer Contract 	Schedules 1, 3 & 4

4 Licence context

The first part of the draft amended licence structure is the licence context. This part of the licence acts as an introduction to the licence, setting out its broad purpose and scope. It includes clauses related to:

- ▼ licence objectives
- ▼ security of critical infrastructure
- ▼ area of operations
- ▼ term of the licence
- ▼ licence amendment
- ▼ non-exclusive licence and availability of licence
- ▼ pricing
- ▼ end of term review, and
- ▼ notices.

4.1 Summary of preliminary positions on licence context

After considering stakeholder comments, we have modified some of our preliminary views and maintained others. We propose to:

- ▼ Amend the licence objective so that it is outcomes-based and aligns with the Sydney Water's objectives under the Act.
- ▼ Clarify in the licence that to the extent that Sydney Water is regulated under the *Security of Critical Infrastructure Act 2018*, its obligations under the SCI Act take precedence over the obligations of the licence where there is any inconsistency between them.
- ▼ Amend the area of operations schedule in the licence so that it refers to the Act, and include a new obligation for Sydney Water to publish a map of its area of operations.
- ▼ Adopt a licence term of 4 years from the commencement date, in line with Sydney Water's proposal.
- ▼ Amend the end of term review clause to specify IPART as the person who will undertake the review.
- ▼ Retain the clauses on pricing, non-exclusivity of the licence and availability of the licence.
- ▼ Amend the notices clause to provide that notices must be approved by the Managing Director of Sydney Water or the CEO of IPART and may be sent electronically, unless otherwise specified in the licence or reporting manual.

4.2 Amend licence objective

Any licence (or other regulatory instrument) should clearly set out its objectives. Ideally, these objectives should describe the outcomes the licence is intended to achieve, as this helps stakeholders to understand why specific obligations have been included in the licence.

We consider that the existing licence objective describes *why* Sydney Water needs to have a licence (ie, to meet legislative requirements) rather than *what outcomes* the licence is intended to achieve. Therefore, in our Issues Paper, we proposed adopting a new outcomes-based licence objective (see Box 4.1).

Box 4.1 Licence objective proposed in the Issues Paper

The objective of the licence is to authorise and require Sydney Water, within its area of operations, to supply water, provide sewerage services and stormwater drainage systems, and dispose of waste water, and to set efficient and effective terms and conditions, including quality and performance standards, balancing the requirements to protect public health, provide services to customers and meet the needs of the community as a whole.

Source: IPART, Review of Sydney Water Corporation Operating Licence – Issues Paper, June 2018.

4.2.1 Most stakeholders supported an outcomes-based objective but proposed aligning the objective with the Act

While Sydney Water indicated that it would prefer to retain the existing licence objective, most other stakeholders – including EPA, FRNSW, ISF and PIAC – supported moving to an outcomes-based objective. However, they did not necessarily support our proposed objective and proposed other alternatives.

Sydney Water's, EPA's and ISF's proposals aligned the licence objective to Sydney Water's objectives in the Act by including references to the protection of the environment, and either the community or broader social good. However, Sydney Water's and EPA's proposals retained our proposed reference to 'efficient and effective terms and conditions'. ISF's proposal included a reference to the promotion of competition.

The Total Environment Centre (TEC) opposed changing the licence objective, and considered our proposed objective would lead to "excessive self-regulation" and compromise the ability of the licence to ensure open accountability of Sydney Water's performance and environmental impact.

4.2.2 We propose to amend the licence objective in line with these stakeholders' views

We disagree with TEC's view and consider it has misinterpreted our proposed objective as providing for Sydney Water to set its own terms and conditions. However, we broadly agree with other stakeholders' proposal to align the licence objective with the objectives in the Act. In addition, while we do not agree with ISF that the promotion of competition should be an

objective of Sydney Water or its licence, we consider that Sydney Water should not prevent or hinder competition and that this principle should be included in the licence objective.

On balance, our proposed position is to amend the licence objective clause so that it reflects Sydney Water's proposed objective, as we consider this objective is outcomes-based, aligns with Sydney Water's objectives in the Act, and generally meets the expectations of stakeholders. However, we have edited and formatted Sydney Water's proposed objective to use the language of the Act, incorporate a reference to not preventing or hindering competition, and provide greater clarity.

Draft recommendation

- 2 Amend the licence objective so that it is outcomes-based and aligns with Sydney Water's objectives under the Act.

The proposed licence objective clause is shown in Box 4.2.

Box 4.2 Proposed licence objective clause

1.1 Objective of this Licence

1.1.1 The objectives of this licence are to:

- a) authorise and require Sydney Water, within its Area of Operations, to:
 - i store or supply water
 - ii provide sewerage services
 - iii provide Stormwater Drainage Systems, and
 - iv dispose of Wastewater, and
- b) set efficient and effective terms and conditions, including quality and performance standards, for Sydney Water to provide services in a way that:
 - i does not prevent or hinder competition
 - ii meets its requirements to protect public health and the environment, and
 - iii supports its objective of being a successful business, including having regard to the interest of the community.

4.3 Clarify regulation for security of critical infrastructure

Sydney Water is regulated as a responsible entity under the *Security of Critical Infrastructure Act 2018* (Cth) (SCI Act), which came into force in July 2018, after we released our Issues Paper in June. It aims to provide a "risk-based regulatory framework to manage national security risks from foreign involvement in Australia's critical infrastructure".¹³

The SCI Act includes three key measures that contribute to the management of national security risks:

¹³ Explanatory Memorandum, Security of Critical Infrastructure Bill 2017.

- ▼ the Register of Critical Infrastructure Assets
- ▼ information gathering power, and
- ▼ Ministerial directions power.

Our preliminary view was that it is not necessary to include an obligation in Sydney Water's licence regarding national security and critical infrastructure issues, but we sought stakeholder views.

4.3.1 Stakeholder support for an obligation on critical infrastructure was limited

Sydney Water and Hunter Water submitted that licence obligations in this area are unnecessary, given both utilities are now covered by the SCI Act.

The Critical Infrastructure Centre (CIC), part of the Department of Home Affairs, submitted that we should consider including critical infrastructure provisions relating to remote offshore access to operational technology, along with provisions about data protection and storage, similar to the amended licences for NSW electricity networks TransGrid, Ausgrid and Endeavour Energy.¹⁴

However, when we contacted the CIC to seek further information on its submission, it indicated that, it did not wish to progress the submission any further.¹⁵ The CIC noted that it is not in a position to provide further evidence on the need for licence obligations on critical infrastructure in time for our draft report. Instead, it will look to engage more generally with the water sector to better understand risks related to remote offshore access to operational technology and data protection and storage.¹⁶

The OEM referred to the *NSW Critical Infrastructure Resilience Strategy* that identifies the need for infrastructure to withstand the shocks of natural, technological and malicious hazards to continue operating, return to service as soon as possible following disruption, and address long-term stresses. The OEM also encouraged IPART to incentivise operators, including Sydney Water, to improve infrastructure and operational resilience using performance indicators. It considered that incentivising operators to reduce service interruptions and minimise wastewater overflows will inevitably lead to investment in more resilient infrastructure.¹⁷

4.3.2 We propose not to include new obligations but refer to the SCI Act

Given CIC is not able to provide further evidence on the need for licence obligations on critical infrastructure at this time, we do not propose to include new obligations. We maintain our preliminary view that such obligations can be introduced through steps laid out in the SCI Act if required. However, we consider it is appropriate to clarify in the licence that to the extent that Sydney Water is regulated under the SCI Act, its obligations under the SCI Act

¹⁴ Critical Infrastructure Centre submission to IPART Issues Paper, August 2018.

¹⁵ Email to IPART, Mr Lachlan Bickley, Critical Infrastructure Centre, 5 October 2018.

¹⁶ Email to IPART, Mr Lachlan Bickley, Critical Infrastructure Centre, 28 November 2018.

¹⁷ NSW Government (Office of Emergency Management (Department of Justice)) submission to IPART Issues Paper, September 2018, p 26.

take precedence over the obligations of the licence where there is any inconsistency between them.

We agree with OEM that it is important to create incentives for operators to reduce service interruptions and minimise wastewater overflows. However, we consider the licence creates such incentives through the performance standards discussed in Chapter 8 of this report.

Draft recommendation

- 3 Not include requirements to manage critical infrastructure in the amended licence.
- 4 Clarify in the licence that Sydney Water is regulated under the *Security of Critical Infrastructure Act 2018* (Cth) and its obligations under that Act take precedence over the obligations in the licence where there is any inconsistency between them.

The proposed licence clause is shown in Box 4.3.

Box 4.3 Proposed critical infrastructure clause

1.2 Security of Critical Infrastructure

1.2.1 Any obligations imposed on Sydney Water under the *Security of Critical Infrastructure Act 2018* (Cth) prevail over the terms and conditions of this Licence, to the extent of any inconsistency between that Act and this Licence.

4.4 Amend area of operations schedule and include new obligation to publish map

The Act requires the Sydney Water licence to contain a schedule that details the area of operations to which the licence applies (the Scheduled Area of Operations).

The Act also describes Sydney Water's Statutory Area of Operations.¹⁸ This Statutory Area of Operations can only be varied by an order of the Governor¹⁹ or by further act of Parliament. The intention is that the Scheduled Area of Operations (ie, the licence) mirrors the Statutory Area of Operations, as varied by a past or future order of the Governor.

We understand that the existing Statutory Area of Operations is the same as it was when Sydney Water ceased to be a company State Owned Corporation and became a statutory State Owned Corporation on 1 January 1999. Sydney Water's Area of Operations as a company State Owned Corporation was, in turn, based on the Area of Operations that the Water Board (under the *Water Board Act 1987*) had immediately before its dissolution. At any time, Sydney Water's area of operations could have been varied by order or regulation. Any such variation would have affected the area of operations adopted by each new Act.

In the existing licence, the Scheduled Area of Operations is detailed by a list of the local government areas (LGAs) within this area (either in full or in part). Our preliminary view was to amend this list to reflect the recent council mergers (which resulted in new, larger LGAs),

¹⁸ In section 10(1).

¹⁹ Under under section 10(2) of the Act.

and to add a map that clearly shows the boundaries of the Scheduled Area of Operations. After release of the Issues Paper and having done further analysis, we consider that there is lack of clarity on Sydney Water's Statutory Area of Operations.

4.4.1 Sydney Water proposed further changes to the Scheduled Area of Operations

Only Sydney Water and Hunter Water commented on the area of operations. Both supported updating the list of LGAs to take account of council mergers.

Sydney Water also proposed further changes to this list. For example, it proposed removing the reference to "part" of Wingecarribee LGA. It argued that although it only operates in part of this LGA, given the non-exclusive nature of the licence (discussed below), and the fact that other councils currently operate water and wastewater facilities within its area of operations, there does not appear to be any need to make a distinction in the case of Wingecarribee LGA.

In addition, Sydney Water did not support adding a map to show the boundaries of the Scheduled Area of Operations. It considers this would be of little benefit, as it would be illustrative only and would change over time as LGAs changed.

4.4.2 We disagree with Sydney Water's proposed changes

Sydney Water's submission seems to imply that its area of operations is defined by the licence, and that changes to the boundaries of the LGAs listed in the licence would always result in a change to its area of operations. However, we disagree with this view.

Sydney Water's licence cannot expand Sydney Water's area of operations. To the extent that a licence is expressed to apply to a smaller area, being an area within Sydney Water's Statutory Area of Operations, Sydney Water would only be authorised to exercise its licence functions in that smaller area.

We consider that some of Sydney Water's proposed changes to the Scheduled Area of Operations are likely to be inconsistent with the Statutory Area of Operations. For example, it appears that only part of the Wingecarribee LGA is included in the Statutory Area of Operations.

4.4.3 We propose to include a new obligation to clarify the area of operations by publishing a map

We maintain the view that Sydney Water's area of operations should be clarified in the licence to ensure the licence obligations apply to the entire Statutory Area of Operations. Further we consider that a map of the area of operations should be published to provide this clarity.

We propose to amend the Scheduled Area of Operations (Schedule 1 of the existing licence) to provide that the licence applies to the whole of Sydney Water's Statutory Area of Operations by specifying that the licence applies to "Sydney Water's entire Area of Operations under section 10(1) of the Act, as varied by any effective order made by the Governor under section 10(2)." It is intended that the licence would apply to Sydney Water's entire Statutory Area of Operations, including any changes made by the Governor while the licence is in

operation. We consider this is consistent with the requirements for a licence schedule in the Act.

We also propose to include new obligations requiring Sydney Water to publish on its website, within 30 days of the licence amendment, a map showing its area of operation containing a specified level of detail. We consider the map should include:

- ▼ the area of operations
- ▼ major waterways and coastline, and
- ▼ local government area boundaries.

This map would need to represent Sydney Water's Statutory Area of Operations.

In addition, we propose to require Sydney Water to publish an updated map of its area of operations within 30 days of any change by the Governor to this area.

Draft recommendation

- 5 Amend the area of operations schedule to refer to the Act, and require Sydney Water to publish a map of its area of operations within 30 days of licence commencement, and make any required updates to the area of operations within 30 days of any change.

The proposed licence clauses are shown in Box 4.4.

Box 4.4 Proposed area of operations clauses

1.3 Area of Operations

1.3.1 This Licence applies to the Area of Operations specified in Schedule A.

1.3.2 Sydney Water must publish on its website a map of its Area of Operations within 30 days of the Commencement Date. Sydney Water must update the map within 30 days of any change to its Area of Operations.

4.5 Adopt 4-year licence term

The Governor may renew an operating licence for a maximum of 5 years at a time under the Act.²⁰ The licence sets the term for which the period of the licence applies from the commencement date.

Our preliminary view was that the licence term should be 5 years, in line with the maximum term. However, we recognised the need to avoid setting a term that would result in concurrent licence and price reviews.

4.5.1 Stakeholders supported a 2-year gap between licence and price reviews

Sydney Water, Hunter Water, DPE (as part of the NSW Government's submission) and AWA-WESN commented on the licence term.

²⁰ Sydney Water Act 1994, s 17.

Sydney Water expressed a preference for a 2-year gap between a licence review and a price review. To ensure this gap, it proposed a 4-year licence term from 2019-2023, and a 5-year price determination from 2020-2025.²¹ Hunter Water and DPE also supported a 2-year gap between licence and price reviews.²² Hunter Water stated that this would enable any change in system performance standards or compliance costs associated with knowledge of new or amended licence obligations to be incorporated into the expenditure proposals for a price submission.²³

AWA-WESN suggested a 2 or 3-year licence term, to provide more opportunities for licence review and improvement. It submitted that the need for significant adaptation is particularly important in the event of a severe drought impacting Sydney's water security.²⁴

In contrast, DPE supported a 5-year licence term in principle. It submitted that a 5-year licence term balances the need to provide regulatory certainty to drive efficient capital and operational performance against the need for flexibility to respond to changes in the water sector. It argued that licence issues that need to be addressed during the term of the licence could be dealt with through a licence amendment.²⁵

4.5.2 We propose to adopt a 4-year term in line with Sydney Water's proposal

We have considered three options for the licence term in detail. These were 3 years, 4 years or 5 years from the commencement date. On balance, we found that a 4-year term is the preferred option, although we may consider reverting back to a 5-year term at the next licence review, as proposed by Sydney Water.

We consider that a 4-year term provides greater flexibility to avoid concurrent licence and price reviews. It would also potentially allow a 2-year gap between the next licence review (2022-23) and the following Sydney Water price review (2024-25) if we adopt a 5-year determination period at the next price review.

Option 1 – 4-year licence term (preferred)

Option 1 would set the term of the licence to be a 4-year term. We consider this option provides a balance between providing regulatory certainty, allowing an appropriate review gap and avoiding concurrent licence and price reviews.

Our cost-benefit analysis considered the review costs and the additional resource costs of simultaneous licence and price reviews (see Appendix A). In our view, simultaneous price and licence reviews would make it difficult for stakeholders to engage in both processes at the same time. Further, it is desirable to establish licence conditions prior to the price review so that it is clear what services correspond to the prices.

To maintain the gap between the licence and price reviews, we propose reverting to a 5-year licence term from 2023. Our cost-benefit analysis indicates returning to a 5-year licence term following the next licence review would minimise the additional average annual cost.

²¹ Sydney Water submission to IPART Issues Paper, August 2018, p 31.

²² DPE submission to IPART Issues Paper, August 2018, p 4.

²³ Hunter Water submission to IPART Issues Paper, August 2018, p 4.

²⁴ AWA-WESN submission to IPART Issues Paper, August 2018, p 2.

²⁵ NSW Government (DPE) Submission to IPART Issues Paper, September 2018, p 4.

Option 2 – 5-year licence term

We consider Option 2 would not resolve our objective to ensure adequate timing between reviews as supported by stakeholders. A 5-year licence period would only allow a 1-year gap between the next licence review (2023-24) under a 5-year price determination (review 2024 -25), or no gap under a 4-year price determination (review 2023-24).

Option 3 – 3-year licence term

We consider Option 3 would not resolve our concerns that reviews are costly and longer periods between reviews are preferred. While a 3-year licence term would potentially allow flexibility for a 2-year review gap between licence review and price determination under a 4-year determination, it would mean a longer 3-year gap under a 5-year price determination.

A 3-year licence term would cause concurrent reviews for Sydney Water, Hunter Water and WaterNSW in 2021-22, which is a large burden on IPART and stakeholders to engage effectively across all three reviews. Our cost-benefit analysis indicates licence reviews are costly for the public water utility and the regulator (see Appendix A). A shorter licence term would increase the average annual cost of the review whereas an appropriate gap as outlined in Option 1 would ensure that the workload for Sydney Water and IPART staff remains manageable.

While some synergy benefits to concurrent reviews for the public water utilities may exist, we consider the review costs to IPART and the regulated entities, as well as the additional complexity in the interactions from simultaneous reviews are substantial enough to support not having concurrent licence reviews.

Draft recommendation

6 Adopt a 4-year licence term from the Commencement Date.

Our proposed licence clause is shown in Box 4.5.

Box 4.5 Proposed licence term clause

1.4 Term of this licence

1.4.1 The term of this Licence is four years from the Commencement Date.

4.6 Retain licence amendment provisions

In our Issues Paper, we did not consider amending the existing clauses on licence amendment, which provide that the licence may be amended by the Governor by notice in the *New South Wales Government Gazette* subject to:

- ▼ the Act
- ▼ tabling the proposed amendment in Parliament under section 16 of the Act, and
- ▼ the Minister providing Sydney Water with reasonable notice of the proposed amendment to enable it to comply with the amendment if it takes effect.

No stakeholders commented on this issue. In our view, the licence amendment provisions should be retained as they are well designed because they contain only the minimum requirements from the Act.

Draft recommendation

- 7 Retain the existing licence amendment provisions in the amended licence.

The proposed licence clauses are shown in Box 4.6.

Box 4.6 Proposed licence amendment clauses

1.5 Licence amendment

1.5.1 Subject to the Act and clause 1.5.2, the Governor may amend or substitute this Licence by notice in the New South Wales Government Gazette.

1.5.2 Before notice of a proposed amendment to this Licence is tabled in Parliament under section 16 of the Act, the Minister must provide Sydney Water with reasonable notice of the proposed amendment to enable it to comply with the amendment if it takes effect.

[Note: The Customer Contract may be varied in accordance with section 59 of the Act and clause 14.2 of the Customer Contract. Such a variation is not an amendment to this Licence for the purpose of section 16 of the Act.]

4.7 Retain non-exclusive licence and availability of licence clauses

Our preliminary view was that we should retain the existing clauses that clarify that the licence does not prohibit any other person from providing services in Sydney Water's area of operations (the non-exclusive licence clause), and require Sydney Water to make a copy of its licence available to any person free of charge (the availability of licence clause).

We have identified no issues with these clauses. Although the Act does not specifically require them to be included in the licence, we consider they give context to the licence as they describe the scope of Sydney Water's operation and how any person can get a copy of the licence. As both Sydney Water and Hunter Water supported our preliminary view, we propose to retain these clauses.

Draft recommendation

- 8 Retain the existing non-exclusive licence and availability of licence clauses.

The proposed licence clauses are shown in Box 4.7a and Box 4.7b.

Box 4.7a Proposed non-exclusive licence clause

1.6 Non-exclusive Licence

1.6.1 This Licence does not prohibit any other person from providing services in the Area of Operations that are the same as, or similar to, the Services, if the person is lawfully entitled to do so.

Box 4.7b Proposed availability of licence clause

1.7 Availability of Licence

1.7.1 Sydney Water must make a copy of this Licence available to any person, free of charge:

- a) on its website for downloading; and
- b) upon request made to the Contact Centre.

4.8 Retain existing pricing obligation

Our preliminary view was that we should maintain the existing pricing obligation in the licence, which requires Sydney Water to set prices subject to the terms of the licence, the *Sydney Water Act 1994* (the Act) and IPART's price determinations. This view reflected our preliminary findings that:

- ▼ the Act requires licence obligations on pricing, and
- ▼ the existing pricing obligation is well designed.

Both Sydney Water and Hunter Water supported our preliminary view, so we propose to retain these clauses.

Draft recommendation

9 Retain the existing pricing obligation in the amended licence.

The proposed licence clause is shown in Box 4.8.

Box 4.8 Proposed pricing clause

1.8 Pricing

1.8.1 Sydney Water must set the level of fees, charges and other amounts payable for its Services in accordance with:

- a) the terms of this Licence;
- b) the Act; and
- c) any applicable maximum prices or methodologies for fixing maximum prices determined under the IPART Act.

4.9 Amend end of term review obligation to specify IPART as reviewer

Our preliminary view was that we should amend the existing clauses on the end of term review of the licence to specify IPART as the person who will undertake the review. We consider this would provide additional transparency in the review process, and align with IPART's function of making recommendations to the Minister for licence amendments.

Sydney Water, FRNSW and Hunter Water all supported this view, so we propose to make this amendment.

Draft recommendation

- 10 Amend the existing clauses on the end of term review of the licence to specify IPART as the person who will undertake the review.

The proposed licence clauses are shown in Box 4.9.

Box 4.9 Proposed end of term review clauses

1.9 End of Term Review

1.9.1 IPART intends to review this Licence in its final year to investigate:

- a) whether this Licence is fulfilling its objectives; and
- b) any issues that have arisen during the term of this Licence that may impact its effectiveness

(the **End of Term Review**).

1.9.2 To assist IPART with the End of Term Review, Sydney Water must provide IPART with such information as IPART reasonably requires. Sydney Water must provide IPART with such information as IPART requests within a reasonable time.

4.10 Amend the notices clause to allow electronic communication

In our Issues Paper, we did not consider amending the clause on notices. Part 11 of the existing licence provides that notices between IPART and Sydney Water will be:

- ▼ provided in hard copy form as a default, and
- ▼ addressed to the Sydney Water Managing Director or the IPART CEO, as relevant.

In our view, it also permits the parties to send notices electronically, but only where the recipient consents to that method or one party has 'notified' an email address to the other.

The Act does not require the licence to contain a provision regarding how Sydney Water and IPART are to send notices to each other. However, such a provision is a necessary machinery provision to facilitate compliance monitoring and our administration of the licence.

We consider a requirement to communicate in hard copy is no longer efficient or effective. We regularly communicate with Sydney Water and other regulated entities electronically, as it is more timely and less costly than providing hard copy notices via post.

We propose to amend the notices clause to clarify that notices may be set electronically, and to clearly distinguish between:

- ▼ the person required to **authorise** a notice (usually the Managing Director of Sydney Water or CEO of IPART), and
- ▼ the **author and addressee** of email communications (usually an officer of the relevant party).

Further, to retain flexibility in reporting requirements, we propose to amend the notices clause to clarify that more specific notices obligations in the licence and the reporting manual take precedence over the notices clause where there is any inconsistency between them.

Draft recommendation

- 11 Amend the notices obligations of the licence to provide that notices under the amended licence must be approved by the Managing Director of Sydney Water or the CEO of IPART and may be sent electronically, unless otherwise specified in the licence or reporting manual.

The proposed licence clause is shown in Box 4.10.

Box 4.10 Proposed notices clause

1.10 Notices

1.10.1 Any notice or other communication given under this Licence must be:

- a) in writing addressed to the intended recipient;
- b) approved by the Managing Director of Sydney Water or the Chief Executive Officer of IPART; and
- c) delivered or sent to one of the addresses specified below (or the last address notified by the recipient), unless otherwise specified in the Reporting Manual.

	Sydney Water	IPART
Electronic	compliance@sydneywater.com.au	compliance@ipart.nsw.gov.au
Postal	Sydney Water The Managing Director Sydney Water 1 Smith Street Parramatta NSW 2150	IPART The Chief Executive Officer Independent Pricing and Regulatory Tribunal Level 15, 2-24 Rawson Place Sydney NSW 2000

5 Licence authorisation

The second part of the draft amended licence is the licence authorisation. This part of the licence authorises and in some cases requires Sydney Water to undertake activities in its area of operations. It includes clauses related to:

- ▼ licence authorisation and stormwater drainage system, and
- ▼ making services available.

5.1 Summary of preliminary positions on licence authorisation

After considering stakeholder comments, we have modified some of our preliminary views and maintained others. We propose to:

- ▼ Amend the licence authorisation and stormwater drainage clauses to clearly differentiate between the ‘required’ and the ‘permitted’ functions of Sydney Water relating to the stormwater drainage systems.
- ▼ Not include an obligation for Sydney Water to apply integrated water cycle management.
- ▼ Not include requirements for Sydney Water to meet waterway health and liveability outcomes, but include a note to clarify Sydney Water’s role in stormwater management.
- ▼ Include an obligation to provide water and sewerage services to water businesses licensed under the WIC Act on request in the ‘Connection of Services’ clause, and allow Sydney Water to impose conditions to ensure safe, reliable and financially viable services.

5.2 Amend licence authorisation to clarify stormwater function

In our Issues Paper, we put the preliminary view that we should make minor drafting amendments to the existing licence authorisation clauses to clearly differentiate between the ‘require’ and ‘permitted’ functions in relation to stormwater drainage systems. In particular, the construction of stormwater drainage systems should be part of the licence authorisation (ie, permitted), but not a requirement on Sydney Water. We made similar changes to the Hunter Water licence in the 2017 licence review.²⁶

Sydney Water, Hunter Water and City of Sydney supported this view. Hunter Water also noted that the changes made to its licence in 2017, where the ‘required’ and ‘permitted’ functions were clearly specified for its stormwater drainage system, are clear and easily understood by internal and external stakeholders. No other stakeholders commented.

Given this feedback, we maintain our preliminary view. We propose to amend the licence authorisation and stormwater drainage clauses to clearly differentiate between the ‘required’ and the ‘permitted’ functions of Sydney Water relating to the stormwater drainage systems to make the clauses clearer for all stakeholders, particularly those who may work with Sydney Water on stormwater initiatives.

²⁶ Hunter Water Operating Licence 2017-2022, clauses 1.2.3 and 1.2.4

Draft recommendation

- 12 Amend the licence authorisation and stormwater drainage clauses to clearly differentiate between the 'required' and the 'permitted' functions of Sydney Water relating to the stormwater drainage systems.

The proposed licence clauses are shown in Box 5.1.

Box 5.1 Proposed licence authorisation and stormwater drainage clauses

2.1 Licence authorisation

2.1.1 This Licence authorises and requires Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems and services for providing the following Services within the Area of Operations:

- a) storing and supplying water;
- b) providing sewerage services; and
- c) disposing of Wastewater.

2.1.2 This Licence authorises and requires Sydney Water to provide, operate, manage and maintain a Stormwater Drainage System as described in section 14(1)(b) of the Act, except to the extent that the Minister is satisfied under sections 14(4) and 14(5) of the Act that satisfactory arrangements have been made for the applicable Service to be provided by another appropriate body.

2.1.3 This Licence authorises (but does not require) Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable Stormwater Drainage Systems (and Services for providing those Stormwater Drainage Systems) within the Area of Operations in excess of the Stormwater Drainage System it is required to provide, operate manage and maintain under clause 2.1.2. This includes increasing the capacity of the Stormwater Drainage System included in the business undertaking transferred under Part 3 of the Act from the Water Board to Sydney Water as at the date of the transfer of the business undertaking.

Note: For the avoidance of doubt, the provision, management and maintenance of Stormwater Drainage Systems (and Services for providing those Stormwater Drainage Systems) under clause 2.1. may include stormwater quality management and other measures as necessary to manage impacts of stormwater on waterway health.]

5.3 Sydney Water can apply integrated water cycle management but is not required to do so

Some stakeholders²⁷ supported the licence including requirements for Sydney Water to apply integrated water cycle management (IWCM) or other innovative approaches to facilitate stormwater management. Stakeholders expressed similar views in our 2016 Sydney Water retail price review, and our 2017 wholesale water prices review.

IPART recognises that IWCM, and liveable cities, are important issues to many stakeholders. However, we do not consider it appropriate to require Sydney Water to apply IWCM in the licence. As we noted in our submission to the Productivity Commission's Issues Paper on

²⁷ AWA-WESN, City of Sydney, Flow Systems, Open Cities Service Alliance, Sydney Water and Total Environment Centre.

National Water Reform, in our view, IWCM and recycled water supply are not benefits or 'ends' in themselves. Rather, they can be **means** of achieving a range of objectives, which are largely related to environmental protection and enhanced liveability.

Some stakeholders commented on external benefits of IWCM. We will consider these comments as part of our current review of recycled water pricing arrangements for public water utilities.²⁸

Our preferred approach to licensing is to specify the outcomes or performance standards that the licensee must achieve, and only specify the means of achieving them where necessary. The licence does not, and is not intended to, **prescribe** how Sydney Water provides its services.

We consider that the existing licence already **permits** Sydney Water to apply IWCM – or other cost-effective principles for water management – in the delivery of services to its customers. If the application of IWCM were prescribed, there is a risk it could lead to conflicting outcomes if IWCM approach does not provide the most cost-effective servicing solution.

Draft recommendation

- 13 Sydney Water can apply integrated water cycle management under the amended licence but is not required to do so.

5.4 Sydney Water can adopt measures to address waterway health and liveability outcomes but is not required to do so

In its submission, Sydney Water sought clarification on whether it can provide stormwater services to achieve objectives including water quality and waterway health. It submitted that implementing measures to address waterway health and liveability is consistent with its principal objective under the Act to protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development²⁹, as well as the special objectives set out in section 22 of the Act.³⁰

City of Sydney and Total Environment Centre supported Sydney Water's view and submitted that water quality, waterway health and liveability outcomes should be clearly specified in the licence.

In response to Sydney Water's comments, we consider that the existing licence does not prevent Sydney Water from achieving waterway health and liveability outcomes, but does not require it to do so. Sydney Water is permitted to perform these tasks as part of providing, managing and maintaining its stormwater drainage systems. Provided that the expenditure associated with these tasks is prudent and efficient, that expenditure could be recovered through its prices.

In response to other stakeholders' views, we note that Sydney Water is already required to protect the environment by conducting its operations in compliance with the principles of

²⁸ We held a public hearing on 4 December 2018. The draft report on recycled water pricing arrangements is scheduled for release in April 2019, followed by a final report in June 2019.

²⁹ Section 6(2) of the *Protection of the Environment Administration Act 1991* lists the principles and programs through which ecologically sustainable development can be achieved.

³⁰ Sydney Water submission to IPART Issues Paper, August 2018, p 28.

ecological sustainable development, as this is one of its principal objectives under the Act.³¹ It is therefore unnecessary for the licence to specify waterway health and liveability outcomes, as long as Sydney Water delivers these outcomes to meet ecological sustainable development principles. In addition, if there is a need for the Government to achieve certain waterway health or liveability outcomes, EPA would be the relevant environmental regulator for these outcomes.

Sydney Water proposed to include the following note in the licence:

To avoid doubt, the provision of Stormwater Drainage Systems and Services under clause 1.3 may include stormwater quality management and other measures as necessary to manage impacts of stormwater on waterway health.

We consider including this or a similar note is reasonable, since stakeholders appear to have many different expectations of Sydney Water's stormwater management role. We also consider that such a note, and our draft recommendation 12 to clearly differentiate between Sydney Water's 'required' and the 'permitted' functions in relation to stormwater drainage systems (discussed above) are sufficient to address and allow for Sydney Water's potential role in waterway health and liveability through its stormwater drainage systems.

Draft recommendation

- 14 Sydney Water can adopt measures to address waterway health and liveability outcomes under the amended licence but it is not required to do so. Include a note in the amended licence to clarify Sydney Water's role in stormwater management.

5.5 Include WIC Act licensees in obligation to make services available

Neither the Act nor the existing licence requires Sydney Water to provide services to a property which is not connected to Sydney Water's network. Most licensees under the WIC Act do not own property connected to the network. The 'code of conduct'³² clause is the only existing licence obligation that addresses WIC Act licensees. Under that clause, Sydney Water must use its best endeavours to cooperate with a WIC Act licensee that seeks to establish a code of conduct.

In our Issues Paper, we identified that if the parties fail to negotiate a mutually satisfactory code of conduct, there is a risk that Sydney Water would not provide services to a WIC Act licensee, or would only provide services on unreasonable terms and conditions. We sought stakeholder comments as well as information to help us consider the most appropriate way to address this risk.

³¹ *Sydney Water Act 1994*, s 21.

³² When there is no industry code of conduct established under cl 25 of the *Water Industry Competition (General) Regulation 2008*, WIC Act licences require WIC Act licensees to establish a code of conduct with each licensed network operator, licensed retail supplier and/or public water utilities that interconnects with the WIC Act licensee's water industry infrastructure (standard licence clause B10 in WIC Act licences).

5.5.1 Stakeholders generally supported obligations to provide services to WIC Act licensees

Sydney Water, DPE and EWON supported including a licence obligation to provide services to WIC Act licensees without specifying service standards, similar to the clause in Hunter Water's licence.

5.5.2 We propose to include an obligation to provide services to WIC Act licensees on request

We consider including an obligation on Sydney Water to provide services to WIC Act licensees is appropriate to address the risk of Sydney Water refusing to provide services. We consider that the clause should be drafted in the same terms as Hunter Water's licence. This would mean that Sydney Water is required to provide services to any WIC Act licensee on request, and is able to impose conditions to ensure safe, reliable and financially viable services. Sydney Water would only be able to refuse requested services if it could demonstrate that the connection is not available. We would monitor compliance through audits, where Sydney Water would need to provide evidence to demonstrate compliance.

We also propose to include further obligations in the amended licence to require Sydney Water to negotiate in good faith with (see section 12.2) and to provide servicing information to (see section 12.3) WIC Act licensees or potential competitors. We propose to include obligations to include annual reporting requirements, such as the number of agreements established and time taken for Sydney Water to respond to information requests, and to monitor the effectiveness of these obligations on providing services to WIC Act licensees or competitors and Sydney Water's compliance with them (see section 12.4).

It is important that the obligation to provide services should be 'on request' from WIC Act licensees because not all WIC Act licensees require services from Sydney Water.³³ Requiring Sydney Water to provide services without WIC Act licensees making a request may result in unintentional consequences and the construction of unnecessary or inefficient infrastructure.

We do not consider that Sydney Water should be required to provide services to 'potential competitors', as we consider services should only be provided to entities that have been granted licences under the WIC Act.

Draft recommendation

- 15 Include an obligation to provide water and sewerage services to a WIC Act licensee on request from the WIC Act licensee, and allow Sydney Water to impose conditions to ensure safe, reliable and financially viable services.

³³ There are 32 WIC Act licensees but only two licensees, involving four schemes, require wholesale services from Sydney Water.

The proposed licence clauses are shown in Box 5.2.

Box 5.2 Proposed make services available clauses

2.2 Obligation to make Services available

2.2.1 Sydney Water must ensure that Services for the supply of Drinking Water and disposal of Wastewater are available on request for connection to any Property situated in the Area of Operations for which a connection is available.

2.2.2 Sydney Water must provide Services for the supply of Drinking Water and disposal of Wastewater on request to any licensee under the WIC Act, where that licensee is connected to (or where a connection is available in respect of that licensee to) Sydney Water's water supply system or sewerage system.

2.2.3 Connection to Sydney Water's systems for the provision of Services for the supply of Drinking Water and disposal of Wastewater is subject to any reasonable conditions that Sydney Water may determine to ensure the safe, reliable and financially viable supply of Drinking Water and disposal of Wastewater to Properties.

6 Water conservation and planning

The third part of the draft amended licence is water conservation and planning. This part of the licence sets out Sydney Water's obligations in relation to water conservation and urban water planning and policy processes. It includes clauses related to:

- ▼ how Sydney Water decides what water conservation activities it will undertake
- ▼ the specific method Sydney Water uses to develop its Water Conservation Program
- ▼ what Sydney Water reports on regarding this method and program, and
- ▼ how Sydney Water contributes to urban water planning and policy processes.

The primary objectives of including these clauses are to ensure that Sydney Water manages the water supply and demand balance effectively and efficiently, and contributes sufficiently to meeting the NSW Government's urban water policies and plans.

Many of the submissions we received in response to our Issues Paper commented on water conservation and planning – including those from Sydney Water, Hunter Water, the NSW Government (DPE), ISF, PIAC, TEC, and AWA-WESN.

The sections below summarise our proposed positions on these issues, then discuss each position in more detail.

6.1 Summary of proposed positions on water conservation and planning

After considering stakeholder comments, we maintain our preliminary views that licence obligations related to water conservation are necessary and appropriate, and that the existing requirements should be broadly retained but amended to improve efficiency. However, we have modified our views on the specific amendments required. We have also formed the view that a new obligation related to urban water planning is necessary.

We propose to:

- ▼ Retain the requirement that Sydney Water use an economic approach to water conservation but provide flexibility for it to use any method once it has been approved by IPART. This should assist Sydney Water to transition from the economic level of water conservation (ELWC) method in response to changes in the NSW Government's urban water planning and policy framework.
- ▼ Retain the existing requirement that Sydney Water obtain IPART's approval for any significant change to its ELWC method, and amend it so that it would apply to any alternative method so as to be consistent with our approval role as per the point above.
- ▼ Include a new obligation that Sydney Water review its ELWC method during the term of the licence, to address stakeholder concerns about the potential limitations of this method and the opportunities to improve it.

- ▼ Amend the reporting requirements so that Sydney Water must publish its ELWC method, and report on an appropriate performance indicator for water conservation, to improve transparency and accountability.
- ▼ Remove the requirements for Sydney Water to develop the ELWC method and transition from fixed targets for water usage and water leakage as these obligations have been completed.
- ▼ Include new obligations to ensure that Sydney Water participates in and supports the NSW Government's urban water planning and policy processes, in response to stakeholder feedback.
- ▼ Retain the existing Priority Sewerage Program obligations to provide transparency to the residents and property owners in the affected areas.

6.2 Retain requirement to use an economic approach to water conservation but provide flexibility

In the NSW Government's submission, DPE indicated that the Government has made recent updates to the urban water policy and planning framework for the 2020 Greater Sydney Water Strategy. To reflect these changes, DPE proposed that the licence be amended to transition Sydney Water from an obligation to use the ELWC method to the MetroNet³⁴ modelling approach, and to require Sydney Water to develop a portfolio of water conservation measures and provide these to DPE to model for the 2020 Greater Sydney Water Strategy.³⁵

Given the changes to the Government's urban water policy and planning framework, we agree that the licence needs to allow Sydney Water to work with DPE to assess and determine water conservation options. However, we consider the obligation should be drafted to maintain the requirement to use the ELWC method, while providing flexibility for Sydney Water to use an alternative economic method (such as the MetroNet model) if it has been approved by IPART. Overall, our aim is to ensure that Sydney Water can assess water conservation options in a practical and timely manner so it can determine the best mix of economically efficient water conservation activities.

We consider our draft recommendation to include a new obligation for Sydney Water to contribute to urban water policy and planning (discussed below) addresses DPE's proposal to develop a portfolio of water conservation measures for the 2020 Greater Sydney Water Strategy.

Draft Recommendation

- 16 Maintain the requirement for Sydney Water to use the approved economic level of water conservation method to assess water conservation options but also provide flexibility for it to use another economic method that has been approved by IPART.

³⁴ MetroNet is an input to the Metropolitan Water Plan and is a hydro-economic model which models supply and drought response measures to identify optimal solutions (maximum supply at least cost) for securing water for Greater Sydney.

³⁵ NSW Government (DPE) Submission to IPART Issues Paper, September 2018, p 9.

The proposed licence clause is shown in Box 6.1.

Box 6.1 Proposed economic level of water conservation method clause

3.1 Economic approach to water conservation

3.1.1 Sydney Water must maintain a water conservation program consistent with the water conservation level determined in accordance with:

- a) the ELWC Method; or
- b) another economic method approved by IPART.

6.3 Retain requirement to obtain approval for significant changes to ELWC method

In our Issues Paper, we put the preliminary view that the existing requirement for Sydney Water to obtain our approval for any significant changes it proposes to the ELWC method be removed on the grounds that it imposed an unnecessary administrative burden. Sydney Water and Hunter Water supported this view. However, TEC argued that the requirement should be retained as removing it would amount to excessive self-regulation and would diminish the overarching role of the licence.³⁶

We propose to retain this requirement, but amend it so it could apply to any other alternative economic method that Sydney Water seeks approval for. We consider this position is consistent with the proposed position outlined in section 6.2 above.

Draft Recommendation

- 17 Retain the requirement for Sydney Water to notify IPART and obtain IPART's approval for any significant changes it proposes to make to the economic level of water conservation method, and amend this requirement so it also applies to any other economic method we have previously approved.

The proposed licence clause is shown in Box 6.2.

Box 6.2 Proposed economic level of water conservation significant changes clause

3.1 Economic approach to water conservation

3.1.5 Before making any significant changes to the ELWC Method, or to the economic method approved by IPART, Sydney Water must:

- a) notify IPART in accordance with the Reporting Manual; and
- b) obtain IPART's prior written approval of the changes.

³⁶ TEC Submission to IPART Issues Paper, August 2018, p 4.

6.4 Include new obligation to review ELWC method during the term of the licence

In their submissions, AWA-WESN and ISF raised concerns about the existing ELWC method, and identified several potential limitations and updates to improve the method (see Box 6.3).

AWA-WESN³⁷ also put the view that there are opportunities to improve the ELWC method by conducting an independent evaluation, and ISF³⁸ outlined the need for revising the method to place more emphasis on the use of scenarios in modelling and sensitivity analysis.

Box 6.3 Summary of potential limitations to ELWC method raised by stakeholders

Value of water

DPE put the view that the ELWC method is a linear model and assumes the highest opportunity cost of water is the long-run marginal cost (LRMC). Therefore, it may not be adequately identifying the economically efficient level of water conservation if it excludes more expensive programs (ie, > \$2/kL) that could help deliver this outcome.

The AWA-WESN raised additional concerns that for the scarcity value, the current ELWC method only accounts for the costs of operating the existing desalination plant and water restrictions, and does not account for future augmentation of the water supply. This risks under investment in water conservation and substantial bill impacts for Sydney Water customers in the future

Localised costs

Both AWA-WESN and ISF also submitted that the current ELWC method does not account for localised avoidable costs in Sydney Water networks to target and avoid costly asset augmentations. In specific locations, these costs may be orders of magnitude higher than the short run cost of supply currently incorporated in the ELWC method.

Accounting for externalities

AWA-WESN noted that the existing ELWC method does not appear to account for externality values of conserved water in current ELWC estimates.

Institutional limitations

ISF submitted that the methodology appears limited in its capacity to drive innovation, provide a foundation for potential future infrastructure, or value the expertise of the Sydney Water's corporate knowledge and ability to ramp up demand management programs quickly.

Source: Submissions to IPART Issues Paper 2018 and DPE response to IPART Request for Information, October 2018.

We consider some of the limitations identified by stakeholders are already considered by the existing ELWC method.

For example, in relation to the value of water, the method currently allows for water conservation projects to be assessed against the relevant short-run or long-run value of water depending on the duration of expected water savings. As the short-run value of water can be

³⁷ AWA-WESN submission to IPART Issues Paper, September 2018, p 4.

³⁸ ISF submission to IPART Issues Paper, August 2018, p 3.

impacted by the drought response and the scarcity components, the short-run value of water is subject to variability and can exceed the long-run value of water. Therefore, DPE's assumption that the LRMC represents the highest opportunity cost does not reflect the existing ELWC method.

For the assessment of localised projects, costs and benefits can be assessed on a project-by-project basis which may include those that aim to address issues at a specific location or part of the water network. As a result the ELWC method can accommodate projects that operate at different geographic scales.

We also note the ELWC method expressly includes the net externalities in the levelised cost of projects and an externalities component in the value of water. Sydney Water's assessment of which projects are economically viable, inclusive of the externality levelised costs, are reported in its 2017-18 Water Conservation Report.³⁹

Given that it has been in place for two years, we consider a review of the ELWC method that includes consultation with stakeholders is warranted to address stakeholders' views. We propose to include an obligation in the licence for Sydney Water to undertake the review by 30 September 2020. This should allow sufficient time following the commencement of the proposed licence. It should also allow Sydney Water to incorporate any relevant outcomes of the current review of recycled water pricing arrangements and the 2020 retail price determination. The ELWC method review would be completed prior to the expected release of the 2020 Greater Sydney Water Strategy in December 2020.

Draft Recommendations

- 18 Amend the licence to include an obligation for Sydney Water to review its ELWC method, including stakeholder consultation, by 30 September 2020.

The proposed licence clauses are shown in Box 6.4.

Box 6.4 Proposed economic level of water conservation review clauses

3.1 Economic approach to water conservation

3.1.3 Sydney Water must, by 30 September 2020 (or another date approved by IPART), review the ELWC Method, or apply another economic method approved by IPART.

3.1.4 In conducting the review referred to in clause 3.1.3, Sydney Water must consult all stakeholders that it considers are likely to be interested.

6.5 Amend reporting requirements to improve transparency and accountability

The concerns stakeholders raised about the existing ELWC method (Box 6.3) suggests that there is an opportunity for Sydney Water to improve the transparency of the method, and to assist stakeholders to better understand the method. We also note that although the ELWC

³⁹ Sydney Water, *Water Conservation Report*, September 2018.

method is available on Sydney Water's website, it is not easy to find and there is no requirement for Sydney Water to make it available.

To improve the transparency and accessibility of the ELWC method and the information about the implementation outcomes from the Water Conservation Report, we propose to require Sydney Water to publish on its website:

- ▼ the ELWC method
- ▼ a Plain English summary of this method, and
- ▼ the economic level of water conservation (expressed as the quantity of water savings in megalitres per day).

In addition, we note that one of the reasons stakeholders opposed removing the reference to fixed targets (discussed in section 6.6 below) is that this would diminish Sydney Water's accountability for its demand management performance. While we do not consider fixed targets are an efficient economic approach to water conservation, we consider it is appropriate to require Sydney Water to report on and be held accountable for its demand management performance. Therefore, we propose to include the level of water usage (expressed as litres per capita per day) as a performance indicator, and require Sydney Water to report on this indicator.

Draft Recommendations

- 19 Amend the licence to require Sydney Water to publish on its website the ELWC method or another economic method approved by IPART, a plain English summary of the method, and the economic level of water conservation expressed as the quantity of water savings in megalitres per day.
- 20 Amend the reporting manual to include a performance indicator for water conservation, as the level of water usage expressed as litres per capita per day.

The proposed licence clause is shown in Box 6.5.

Box 6.5 Proposed economic level of water conservation reporting clause

3.1 Economic approach to water conservation

3.1.2 Sydney Water must make a copy of the ELWC method (or another method approved by IPART under clause 3.1.1(b)), a plain English summary of that method and the economic level of water conservation (expressed as the quantity of savings in megalitres per day) available to any person, free of charge:

- a) on its website; and
- b) upon request made to the Contact Centre.

6.6 Remove requirements to develop ELWC method and transition from fixed targets

We maintain our preliminary view that requirements to develop the ELWC method and transition from fixed targets to an economic approach to water conservation should be removed, as these requirements have been completed. Some stakeholders opposed removing the requirement related to fixed targets, but we consider any reference to these are no longer necessary following the transition to the ELWC method. Therefore, our proposed position is to remove both these requirements.

As noted above, we consider fixed targets are not an efficient economic approach to water conservation. However, we consider that requiring Sydney Water to report on a performance indicator of the water usage (litres per capita per day) is an appropriate performance indicator for water conservation to improve transparency and accountability.

Draft Recommendation

- 21 Remove the requirements for Sydney Water to develop an economic level of water conservation method, and transition from fixed targets for water usage and water leakage.

6.7 Include new obligations to participate in and support urban water planning

In our Issues Paper, we considered water planning in the context of Sydney Water's existing obligations. The existing licence includes an obligation for Sydney Water to use its best endeavours to develop and maintain a Roles and Responsibilities Protocol with DPE. This Protocol has not been developed, and DPE notified Sydney Water in early 2018 that it was no longer required and that Sydney Water and DPE could instead collaborate and address specific issues through other arrangements. Based on this information, our preliminary view was that the obligation should be removed.

However, after considering stakeholder comments, we have reconsidered this obligation in the broader context of Sydney Water's role in urban water planning. As a consequence, we propose to replace the existing obligation with new requirements for Sydney Water to participate in and support urban water planning processes.

6.7.1 Stakeholders support requirements to participate in and support water planning

In general, stakeholders supported including new obligations for Sydney Water to cooperate with DPE for urban water planning. In its submission, Sydney Water proposed a best endeavours requirement to participate in metropolitan water planning processes.⁴⁰ DPE proposed amendments to the licence to facilitate implementation of the urban water policy and planning framework, and to require Sydney Water to collaborate with WaterNSW to submit joint integrated long-term capital and operational plans and drought response plans to the portfolio Minister by December 2020.⁴¹

⁴⁰ Sydney Water submission to IPART Issues Paper, August 2018, p 43.

⁴¹ NSW Government (DPE) Submission to IPART Issues Paper, September 2018, p 13.

DPE also proposed an amendment to require Sydney Water to provide DPE with specified water use and forecasting data within a specified time if required. It submitted that this data would be used to provide the evidence base for the 2020 Greater Sydney Water Strategy, measure the performance of the policy decisions against success criteria, deliver policy and strategy work, and provide advice to the Minister on various policy actions and outcomes.

6.7.2 Our proposal is in line with stakeholder views

As the largest urban water utility in the Greater Sydney area, we consider Sydney Water has a role to play in urban water policy development and planning. Therefore, we propose to replace the obligation in relation to developing a Roles and Responsibilities Protocol with DPE with a new general obligation for Sydney Water to use its best endeavours to participate cooperatively in the Government's urban water policy and planning processes.

We also propose to include additional obligations for Sydney Water to submit plans to the portfolio Minister and submit data under a data sharing arrangement with DPE.

Submit plans to portfolio Minister

We support DPE's proposal to require Sydney Water to submit its long-term capital and operational plans and drought response plans to the portfolio Minister. These plans reflect NSW Government policy, so making them available to the Government could be useful to inform DPE's urban water planning policy, as well as our own review of Sydney Water's prices. This should not be overly burdensome for Sydney Water, as it uses related information to prepare other plans that include capital and operational expenses for investment planning, and to develop its water demand forecasts for pricing purposes.

In addition, we agree that it would be reasonable for Sydney Water and WaterNSW to collaborate in the development of the plans. However, we propose to only require Sydney Water to use its best endeavours to cooperate with WaterNSW. If the licence only required Sydney Water to cooperate, Sydney Water's compliance would depend partly on the actions of WaterNSW, which we consider inappropriate.

Submit data under a data sharing agreement with DPE

In developing NSW's urban water strategies and plans, DPE carries out several functions that require detailed data about Sydney's water usage, and forecast water demand and supply. We understand that DPE is concerned about the risk that Sydney Water may not provide this data.

To address this concern, we consider it is appropriate to include a licence obligation that Sydney Water develop and enter into a data sharing agreement with DPE. In addition, we consider that the data sharing agreement should set out the data requirements, the timing of data requests and provision, and the procedures Sydney Water and DPE would use to manage disputes.

In our view, such an agreement would support both DPE's urban water policy and planning functions, while also protecting Sydney Water's ability to provide such information and the risk of failing to comply with its licence if it is unable to meet these requests. For example, in developing the arrangement, Sydney Water and DPE should be able to identify the data

purposes and constraints, and balance DPE's need for data to deliver policy and strategy and advise the Minister on policy outcomes with any of Sydney Water's limitations in meeting the request, such as data availability. We consider Sydney Water's privacy concern about the sharing of data can be dealt with by providing only de-identified data to DPE.

Draft recommendations

- 22 Amend the licence to include a new requirement for Sydney Water to use its best endeavours to participate cooperatively in urban water planning and policy processes for Greater Sydney.
- 23 Amend the licence to include new requirements for Sydney Water to develop and submit to the portfolio Minister by December 2020, a long-term capital and operational plan and a drought response plan, and to use its best endeavours to develop these plans as joint plans in cooperation with WaterNSW.
- 24 Amend the licence to include a new requirement for Sydney Water to develop and enter into a data sharing agreement with DPE by 30 June 2020 (or another date approved by IPART).

The proposed licence clauses are shown in Box 6.6.

Box 6.6 Proposed water planning clauses

3.2 Water planning

Long-term capital and operational plan and drought response plan

3.2.1 By 1 December 2020, Sydney Water must develop, and submit to the Minister:

- a) a long-term capital and operational plan, and
- b) a drought response plan.

3.2.2 Sydney Water must use its best endeavours to develop the plans referred to in clause 3.2.1 in cooperation with Water NSW.

Metropolitan Water Plan

3.2.3 Sydney Water must use its best endeavours to participate cooperatively in the implementation and review of the Metropolitan Water Plan.

3.2.4 Sydney Water must develop and enter into a data sharing agreement with DPE by 30 June 2020 (or another date approved by IPART), for the purpose of sharing data and information to assist DPE in the development and review of the Metropolitan Water Plan (the **Data Sharing Agreement**).

3.2.5 In addition to any other matters agreed by Sydney Water and DPE, the Data Sharing Agreement must:

- a) set out the roles and responsibilities of Sydney Water and DPE under the Data Sharing Agreement;
- b) set out the reasons for sharing the data and information;
- c) set out the uses to which the data and information will be put;
- d) set out the requirements that shared data and information must meet;
- e) identify agreed timelines and the format for sharing data and information; and
- f) identify procedures for resolving matters of conflict in providing data and information.

3.2.6 Once Sydney Water has entered into the Data Sharing Agreement it must comply with the Data Sharing Agreement.

6.8 Retain Priority Sewerage Program clauses

The Act does not require the licence to include terms and conditions for the Priority Sewerage Program (PSP).

Our preliminary view was that including licence obligations in relation to the PSP was not appropriate as there is no clear rationale for IPART to intervene with servicing specific unsewered areas. We considered the list of six specific PSP areas in Schedule 3 of the existing

licence could create the perception that Sydney Water is responsible for delivering the 20-year old program.⁴²

We asked stakeholders for their views on maintaining or removing the existing obligations on Sydney Water to cooperate with, and participate in, any Government review of the PSP.

6.8.1 Stakeholders expressed mixed views on PSP obligations

Sydney Water and Hunter Water agreed that the PSP obligations should be removed from the licence. Sydney Water submitted that its preference is for the licence to focus on terms and conditions relating to its general customer base, rather than specific, localised programs. It indicated that it plans to provide sewerage services to Austral between 2020 and 2022 and to Menangle Park between 2022 and 2024, as part of its capital infrastructure program to service Greenfield growth.⁴³ Hunter Water submitted that retaining the PSP obligations would be inconsistent with the *Best Practise Licensing Framework* as the case for licensing intervention has not been established.⁴⁴

In contrast, DPE, Northern Beaches Council and Scotland Island Residents Association support maintaining the current PSP obligations. ISF suggested Sydney Water should consider a range of options for unsewered communities. EPA encouraged improved sewerage systems where they can provide improved protection to human and environmental health.

6.8.2 We consider retaining the PSP clauses is reasonable

On balance, we consider that retaining the existing obligations and the list of six PSP areas (Schedule 3 of the existing licence) is reasonable to provide transparency to the residents and property owners in these areas. The PSP has been a long running NSW Government program where properties in some of the unsewered areas have progressively been serviced or have been promised services at various times.

The existing licence clauses were designed with the minimum necessary requirements once we established the need for licensing in the 2015 licence review. These clauses have not incurred compliance costs since 2015, as the Government has not required Sydney Water to participate in the review or implement outcomes of the review to date. Under our risk-based compliance framework, we would only audit the existing clauses for PSP if they are triggered (that is, if the review of PSP commences).

Draft recommendations

- 25 Retain the existing Priority Sewerage Program obligations.
- 26 Retain the list of areas and update the estimated number of lots in the Priority Sewerage Program shown in Schedule 3 of the existing licence.

⁴² PSP is a government program that commenced in 1997 to service unsewered areas.

⁴³ Sydney Water submission to IPART Issues Paper, August 2018, pp 74, 75.

⁴⁴ Hunter Water submission to IPART Issues Paper, August 2018, p 10.

The proposed licence clauses are shown in Box 6.7.

Box 6.7 Proposed Priority Sewerage Scheme clauses

3.3 Priority Sewerage Program

3.3.1 Sydney Water must cooperate with, and participate in, any NSW Government review of the Priority Sewerage Program.

3.3.2 If required by the Minister, Sydney Water must implement and comply with any outcomes (including timeframes) of any NSW Government review of the Priority Sewerage Program.

[Note: The areas to which the Priority Sewerage Program applies are Austral, Menangle, Menangle Park, Nattai, Scotland Island and Yanderra as listed in Schedule B of this Licence.]

7 Performance standards for water quality

The fourth part of the draft amended licence is performance standards for water quality. This part of the licence sets out obligations that aim to ensure Sydney Water's services and systems meet specified performance standards for water quality. It includes clauses related to:

- ▼ drinking water quality
- ▼ recycled water quality, and
- ▼ fluoridation.

7.1 Summary of proposed position on performance standards for water quality

After considering stakeholder comments, our proposed position is to retain the existing water quality clauses with only minor amendments to remove duplication and the completed clause, and to improve flexibility in both water quality monitoring and end-uses for recycled water, which are broadly in line with our preliminary views. Specifically, we propose to:

- ▼ retain obligations to maintain management systems consistent with the *Australian Drinking Water Guidelines* (ADWG) and the *Australian Guidelines for Water Recycling* (AGWR)
- ▼ expand the definition of the AGWR in the amended licence to include all volumes of these guidelines
- ▼ remove obligations to obtain NSW Health's approval for any significant changes Sydney Water proposes to make to the Drinking Water and Recycled Water Quality Management Systems, and to notify IPART and NSW Health of any significant changes
- ▼ retain obligation to comply with the *Fluoridation Code*, and add a new clause to clarify that NSW Health can specify different requirements to those in the *Fluoridation Code* to help us clearly define our compliance monitoring task
- ▼ remove the obligation for Sydney Water to review its public reporting on drinking water quality as this has been completed, and
- ▼ move the list of water quality monitoring characteristics in the existing reporting manual to the Drinking Water Quality Management System.

7.2 Retain obligations to maintain management systems consistent with ADWG and AGWR

The Act states that the licence is to include terms or conditions to ensure Sydney Water's systems and services meet specified quality and performance standards on water quality.⁴⁵ Therefore, the licence must have obligations to ensure safe drinking water and recycled water quality.

The existing licence adopts the ADWG and the AGWR as the specified quality and performance standards on water quality in the licence. It includes obligations to maintain systems consistent with these guidelines. Our preliminary view was to retain these obligations.

7.2.1 Stakeholders and cost-benefit analysis support retaining ADWG obligation

Our proposed position is to retain the existing obligation for maintaining management systems consistent with the ADWG. All stakeholders who commented on this issue supported retaining this obligation. In addition, the results of our cost-benefit analysis indicate that this obligation has a strong position net benefit (Table 7.1, see also Appendix A).

Table 7.1 Cost-benefit analysis of ADWG licence obligation

	Health benefit	Cost	Net benefit	Benefit-cost ratio
	\$/person/year	\$/person/year	\$/person/year	
base	135	30	105	4.5
low	122	30	92	4.1
high	369	30	339	12.3
low-inhouse filtration	116	30	86	3.9

Sources: Sapere Research Group (11 Oct 2018), Sydney Water (7 Sep 2018)

7.2.2 Stakeholders supported retaining AGWR obligation although cost-benefit analysis shows it has negative net benefit

Stakeholders generally supported retaining the existing AGWR obligation. In addition, NSW Health recommends the use of the AGWR for all NSW water utilities. For this reason, we propose to maintain this obligation, even though our cost-benefit analysis suggests that it has a negative net benefit (Table 7.2).

⁴⁵ *Sydney Water Act 1994*, s 14(c).

Table 7.2 Cost-benefit analysis of AGWR licence obligation

	Health benefit	Cost	Net benefit	Benefit-cost ratio
	\$/person/year	\$/person/year	\$/person/year	
base	0.135	3.32	-3.18	0.0
low	0.122	3.32	-3.20	0.0
high	0.369	3.32	-2.95	0.1
low-household filtration	0.116	3.32	-3.20	0.0

Sources: Sapere Research Group (2018), Rouse Hill Recycled Water Development Servicing Plan 2016, pp 11, 22, 24, 55.

This analysis is limited to consider only harm from cross-connection and does not include costs due to other exposure risks. The available information does not support a conclusion that the licence obligation to observe the AGWR passes a cost-benefit test. This is partly because the health benefits from improved recycled water quality are reduced by the fact that cross-connection, and therefore human consumption of recycled water, is rare. However, although the benefits delivered by the AGWR are difficult to quantify, we propose to retain this obligation.

Draft recommendations

- 27 Retain the existing clauses on maintaining management systems consistent with the *Australian Drinking Water Guidelines*.
- 28 Retain the existing clauses on maintaining management systems consistent with the *Australian Guidelines for Water Recycling*.

The proposed licence clauses are shown in Box 7.1.

Box 7.1 Proposed water quality management system clauses

4.1 Drinking Water

4.1.1 Sydney Water must maintain a Management System that is consistent with the Australian Drinking Water Guidelines and any requirements relating to Drinking Water specified by NSW Health (the **Drinking Water Quality Management System**).

4.1.2 In the event of inconsistency between the requirements specified by NSW Health referred to in clause 4.1.1 and the Australian Drinking Water Guidelines, the requirements specified by NSW Health prevail.

4.1.3 Sydney Water must ensure that the Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Drinking Water Quality Management System and to the satisfaction of NSW Health.

[Note: Sydney Water is to apply the Drinking Water Quality Management System to the Drinking Water system under its control, having regard to the entire Drinking Water supply system – from the water catchment to the Consumer.]

4.2 Recycled Water

4.2.1 Sydney Water must maintain a Management System that is consistent with the Australian Guidelines for Water Recycling and any requirements relating to water recycling specified by NSW Health (the **Recycled Water Quality Management System**).

4.2.2 In the event of inconsistency between the requirements specified by NSW Health referred to in clause 4.2.1 and the Australian Guidelines for Water Recycling, the requirements specified by NSW Health prevail.

4.2.3 Sydney Water must ensure that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Recycled Water Quality Management System and to the satisfaction of NSW Health.

7.3 Expand definition of Australian Guidelines for Water Recycling

There are four volumes of AGWR:

- ▼ Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) – 2006 (AGWR Phase 1)
- ▼ Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) – Augmentation of Drinking Water Supplies – 2008
- ▼ Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) – Stormwater Harvesting and Reuse – 2009
- ▼ Australian Guidelines for Water Recycling: and Managing Health and Environmental Risks (Phase 2) – Managed Aquifer Recharge – 2009.

The existing definition for the AGWR in the licence includes only the AGWR Phase 1.

In its submission to the Issues Paper, Sydney Water proposed including other volumes of guidelines in the definition to allow for potential future situations where it may operate

schemes with end-uses beyond those covered in AGWR Phase 1. We consider this request reasonable to avoid the licence limiting the end-uses available to Sydney Water. NSW Health would still be able to specify other appropriate guidelines under the proposed licence clause if required.

Draft recommendation

- 29 Expand the definition of *Australian Guidelines for Water Recycling* in the amended licence to include all volumes.

7.4 Sydney Water is not precluded by the licence from engaging with NSW Health on changes to its water quality management systems

Our preliminary view was to remove the existing requirements for Sydney Water to obtain NSW Health's approval for any significant change to the Drinking Water Quality Management System and the Recycled Water Quality Management System. We considered that these requirements overlap with the existing requirement to fully implement the management systems to the satisfaction of NSW Health. In particular, the process of managing proposed significant changes to these systems is part of fully implementing the systems. In addition, implementing the management system "to the satisfaction of NSW Health" achieves the same intent as "obtain NSW Health's approval". Sydney Water can choose to engage with NSW Health on changes to its water quality management systems.

Stakeholders who commented on this issue expressed mixed views:

- ▼ Sydney Water did not support our preliminary view, and submitted that it preferred to retain the existing requirements. It submitted that NSW Health's approval of proposed significant changes is a forward-looking approval mechanism, whereas the implementation of the management systems is a backward-looking review mechanism. PIAC did not support our preliminary view given the inconsistency with Sydney Water's view.⁴⁶
- ▼ On the other hand, OEH agreed with our preliminary view⁴⁷ and NSW Health did not object to it.⁴⁸

After considering stakeholder views, we maintain our preliminary view. We propose to remove the requirements for Sydney Water to obtain NSW Health's approval for any significant change to the Drinking Water Quality Management System and the Recycled Water Quality Management System. We consider these requirements duplicate those to fully implement these systems to the satisfaction of NSW Health, and their removal should have some benefits in reducing compliance cost. We made similar changes to the Hunter Water licence in the 2017 Hunter Water licence review.

Draft recommendation

- 30 Remove the existing clauses on obtaining NSW Health's approval for any significant changes that Sydney Water proposes to make to the Drinking Water Quality Management

⁴⁶ PIAC submission to IPART Issues Paper, August 2018, p 4.

⁴⁷ NSW Government (OEH) submission to IPART Issues Paper, September 2018, p 19.

⁴⁸ NSW Government (NSW Health) submission to IPART Issues Paper, September 2018, p 15.

Sydney and the Recycled Water Quality Management Systems, as the licence does not preclude Sydney Water from engaging with NSW Health on these changes.

7.5 Sydney Water to notify IPART and NSW Health of significant changes to its water quality management systems through the reporting manual

Our preliminary view was that the licence obligations to notify IPART and NSW Health of any proposed significant changes to the Drinking Water Quality Management System and the Recycled Water Quality Management System duplicate the existing reporting requirement set out in the reporting manual, and therefore should be removed.

Sydney Water's submitted that it preferred to retain these obligations in the licence. PIAC did not support our preliminary view because it was inconsistent with Sydney Water's view.⁴⁹ However, NSW Health did not object to removing the notification clauses in the licence and relying on the reporting manual requirements to achieve the same end.⁵⁰

We maintain the view that the notification requirements in licence duplicate the requirements in reporting manual for Sydney Water to notify IPART and NSW Health of any significant changes that it proposes to make to its water quality management systems. In addition, we consider as the notification requirements in the licence are essentially reporting requirements, they belong in the reporting manual.

Draft recommendation

- 31 Remove the existing clauses in the licence on notifying IPART and NSW Health of any proposed significant changes to the Drinking Water Quality Management System and the Recycled Water Quality Management System, as Sydney Water is already required to do so in the reporting manual.

7.6 Retain the fluoridation obligation and add new clause

The existing licence specifies that Sydney Water must comply with the *Fluoridation Code*. In our Issues Paper, we put the preliminary view that this obligation duplicates other legislation and sought stakeholder views. We also indicated if we retained the obligation, we may add "except to the extent that NSW Health specifies otherwise" to the existing clause.

In submissions, Sydney Water and NSW Health supported retaining the obligations in the licence. NSW Health reiterated its previous position that the licence is the most appropriate mechanism to set out key Government requirements of public interest in a succinct and accessible form.⁵¹ It also argued that as the *Fluoridation Code* already allows NSW Health to specify different requirements to the code, an additional clause to that affect is not necessary.

In addition, NSW Health provided information that suggests that retaining the obligation in the licence would not lead to duplication. Under the *Fluoridation Code*, NSW Health can review Sydney Water's internal audits of the fluoridation requirements and may undertake an independent audit of Sydney Water's compliance. However, NSW Health indicated that

⁴⁹ PIAC submission to IPART Issues Paper, August 2018, p 4.

⁵⁰ NSW Government (NSW Health) submission to IPART Issues Paper, September 2018, p 16.

⁵¹ NSW Government (NSW Health) submission to IPART Issues Paper, September 2018, p 16.

IPART's 2017 operational audit of Sydney Water's licence clause on fluoridation helped identify opportunities for improvements, which may not have been identified without a licence clause. This suggests the clause results in complementary rather than duplicative compliance monitoring.

In light of stakeholder comments, we propose to retain the fluoridation obligation. However, while we accept NSW Health's point that it is already able to specify different requirements to the code, we propose to include an additional clause to this affect because this will assist us in clearly defining our task in monitoring Sydney Water's compliance with this obligation.

Further, our desktop review of publicly available cost-benefit analyses of fluoridation found that most studies strongly support fluoridation for improved dental health.

Draft recommendation

- 32 Retain the existing clause in the licence on complying with the *Fluoridation Code*, and add a clause to clarify that NSW Health can specify different requirements to those in the *Fluoridation Code*.

The proposed licence clauses are shown in Box 7.2.

Box 7.2 Proposed Fluoridation Code clauses

4.3 Fluoridation Code

4.3.1 Sydney Water must comply with the Fluoridation Code and any requirements for fluoridation specified by NSW Health.

4.3.2 In the event of inconsistency between the requirements specified by NSW Health referred to in clause 4.3.1 and the Fluoridation Code, the requirements specified by NSW Health prevail.

7.7 Remove completed clause on review of public reporting

In line with our preliminary view, we propose to remove the obligation for Sydney Water to undertake a review of its public reporting on water quality by 31 December 2016. Sydney Water has completed this review as required. As a result of the review, it has proposed to present water quality data that customers and stakeholders are interested in, in ways that are more easily understood and accessible to members of the public. It has also implemented changes such as linking water quality monitoring results with a property address search function on its website to improve access to information that is relevant to the customers.

Draft recommendation

- 33 Remove the completed clause which required Sydney Water to review its public reporting on drinking water quality.

7.8 Move water quality monitoring characteristics from reporting manual to Drinking Water Quality Management System

Our preliminary view was to move the list of water quality monitoring characteristics from the reporting manual to a schedule of the Drinking Water Quality Management System. These characteristics are currently in Appendix B, Health and aesthetic water characteristics and raw water operational characteristic, of the reporting manual.⁵² We considered this would enable greater flexibility for Sydney Water and NSW Health in water quality monitoring.

NSW Health did not object to this, provided no reporting obligations are removed. It noted that it would be easier to update the list of monitoring characteristics if it was part of the Drinking Water Quality Management System. It also noted that water quality monitoring is essential to the satisfactory implementation of a water quality management system.

Sydney Water supported our preliminary view, and Hunter Water noted that its water quality monitoring characteristics are detailed within Hunter Water's Drinking Water Quality Management System.⁵³

Given stakeholder views, we propose to move the water quality monitoring requirements from the appendix of the reporting manual to the Drinking Water Quality Management System. We note Sydney Water would still be required to report to the public and NSW Health on a regular basis in accordance with the reporting manual. Our cost-benefit analysis concluded there are net benefits of drinking water quality monitoring and reporting (Appendix A). Under our risk-based compliance approach, we audit the Drinking Water Quality Management each year.

Draft recommendation

- 34 Move Appendix B (Drinking Water health and aesthetic water characteristics and raw water operational monitoring characteristics) in the existing reporting manual to a reporting schedule in the Drinking Water Quality Management System.

⁵² The Issues Paper refers to Appendix F of the previous version of the reporting manual (August 2017). The same appendix is in Appendix B of the existing Reporting Manual (July 2018).

⁵³ Hunter Water submission to IPART Issues Paper, August 2018, p 7.

8 Performance standards for service interruptions

The fifth part of the draft amended licence is performance standards for service interruptions. This part of the licence sets out obligations that aim to ensure Sydney Water's services and systems meet specified performance standards for service interruptions. The clauses in this part of the licence correspond to the existing system performance standards for water continuity, water pressure and wastewater overflow in the existing licence.

This part of the licence also includes obligations for an asset management system which is discussed in Chapter 9 of this draft report.

8.1 Summary of proposed positions on performance standards for service interruptions

After considering the results of our further analysis, Sydney Water's proposed standards, and stakeholder comments, we propose to amend the existing performance standards for water continuity, wastewater overflow and water pressure to better reflect customers' preferences and the value they place on the service outcomes Sydney Water provides, and to balance these against the cost of providing the services.

For all three performance standards, we propose to express the standards as the number of properties that meet the standard per 10,000 properties.

For the water continuity standard, we propose to:

- ▼ amend the standard based on the results of Sydney Water's optimisation model, including setting a target level and a tolerance band for single event unplanned water interruptions that last for more than five continuous hours, and
- ▼ remove the standard for multiple unplanned water interruptions, but retain the requirement to report on the number of properties affected by multiple events as an IPART performance indicator.

For the water pressure standard, we propose to:

- ▼ amend the standard so it focuses on multiple repeat water pressure failure events, and longer water pressure failure events, and
- ▼ add new requirements for Sydney Water to address the services provided to properties in areas affected by recurring low pressure, and review its business processes to ensure new property owners at these areas are informed.

For the wastewater overflow standard, we propose to:

- ▼ retain the existing threshold levels for both single and multiple events, and
- ▼ retain the existing approach that excludes public properties from the wastewater overflow standard.

We consider that there is likely to be opportunities to undertake further work on the measures and level of performance standards for service interruptions in the future.

We note NSW Health's comments on the importance of carefully considering the rationale for amending performance standards, particularly if the outcomes diminish health standards. However, we do not consider optimising the performance standards for service interruptions would diminish health standards because we propose to maintain the measure of single event for unplanned water supply interruptions at five hours. In addition, our proposed Customer Contract requires Sydney Water to restore service as quickly as possible.

We also note AWA-WESN's suggestion to adopt new performance standards such as a least-cost planning standard and an affordability of water services standard. We do not consider new standards on these issues are necessary or appropriate in the licence. This is because the Act does not require them to be included in the licence, and we already consider least-cost planning and service affordability in Sydney Water's price reviews.

8.2 Summary of existing performance standards for service interruptions

The existing performance standards are summarised in Table 8.1.

Table 8.1 System performance standards in existing licence

System performance standard (in any financial year)	No of properties	Description
1. Water continuity		
▼ Single event	40,000	Unplanned water interruption > 5 hours
▼ Multiple events	14,000	Three or more unplanned water interruption > 1 hour
2. Water pressure		
▼ Single event	6,000	Pressure below 15 metres for 15 minutes
3. Wastewater overflow		
▼ Single event	14,000	Dry-weather wastewater overflow
▼ Multiple events	175	Three or more dry-weather wastewater overflows

Source: Sydney Water Corporation Operating Licence 2015-2020, cl 4.2.1 to cl 4.2.3.

In our Issues Paper, we expressed the preliminary view that these performance standards should be revised using an economic approach to ensure they reflect customers' preferences and the value they place on the service outcomes Sydney Water provides, and balances these against the cost of service provision.

After releasing the Issues Paper, we conducted further analysis to help identify the appropriate level for the water continuity and wastewater overflow standards. We concentrated on these two standards because we did not have sufficient information to analyse all three in detail, and we considered the potential benefits for Sydney Water customers from optimising these standards were greatest.

For the water continuity standard, we developed an optimisation model to identify the performance level that reflects customers' willingness to pay. For the water pressure standard, we reviewed water pressure information from Sydney Water and the results of Sydney Water's recent customer engagement surveys but did not undertake modelling. For the

wastewater overflow standard, we developed an optimisation model to determine the appropriate performance level. However, we are not confident that this type of system failure can be reliably modelled, as it is difficult to draw reliable causal inferences on the relationship between management actions by Sydney Water, their costs and their efficacy in reducing the incidence or severity of wastewater overflows.

The sections below summarised our proposed positions, and then discuss each position in more detail.

8.3 Express all standards for service interruptions as number of properties that meet the standard per 10,000 properties

Our preliminary view was to express system performance standards as a percentage of the properties that meet the standard, rather than an absolute numerical level. This was to allow for the effect of population growth and development in Sydney.

Sydney Water submitted that it preferred to express performance standards as a ‘percentage of properties supplied’. It considered this would automatically account for the impact of growth, so there would be no need to frequently revisit the standard limits. It also proposed using a rolling average to measure performance, as this would demonstrate the underlying service trend while making allowance for external impacts that vary from year to year.

After considering Sydney Water’s views, and further analysis, we now propose to express the standards for water continuity, water pressure and wastewater overflow as the number of properties that meet the standard per 10,000 properties. We consider that expressing them as the percentage of properties that meet the standard would not provide meaningful numbers to customers or other stakeholders. This is because the percentage would need to be shown to at least two decimal places, due to the large number of properties that meet the standard relative to the total number of properties.

Table 8.2 illustrates several options for expressing the performance standards for service interruptions, using the existing water continuity standard as an example. We consider our proposed approach would allow for the effect of population growth and development in Sydney, while also showing the number of properties as whole numbers which would be more meaningful to customers and other stakeholders.

Table 8.2 Options for the way the measure of performance is expressed – existing water continuity standard

Measure of performance (in any financial year)	Calculation	Value
Properties that do not meet the standard	As per existing licence cl 4.2.2	40,000
Properties that meet the standard	1,981,000 – 40,000	1,941,000
% of properties that meet the standard	$(1,941,000 / 1,981,000) * 100\%$	97.98%
Properties that meet the standard per 10,000 properties	$(1,941,000 / 1,981,000) * 10,000$	9,798

Note: Total number of connected properties: water supply (000s) = 1,981 (Sydney Water, *Operating Licence - NWI Performance Indicators Report 2017-18*, September 2018)

Source: IPART

While Sydney Water’s proposal to use a rolling average for the performance standards could smooth out short-term changes and highlight long-term trends, we do not propose to use this approach. Instead, our proposed position is to set an optimised target with a tolerance band for the water continuity standard (discussed in section 8.4 below). This would allow for weather variation and other factors that are not within Sydney Water’s control. For the water pressure and wastewater overflow standards, we propose to maintain the existing expression of performance levels that are presented as the minimum threshold that Sydney Water must satisfy.

For all performance standards for service interruptions, we also propose to retain the existing clause that provides, if there is ambiguity in the interpretation or application of any system performance standard, IPART’s interpretation or assessment of the application of the system performance standard will prevail. No stakeholders expressed concern with this arrangement, and we consider it is appropriate as queries or disagreements should be resolved with the licence regulator.

Draft recommendations

- 35 Express the measure of performance as the number of properties that meet the standard per 10,000 properties.
- 36 Retain the interpretation of system performance standards clause, where IPART’s interpretation of the system performance standards will prevail if there were ambiguity in the interpretation or application of any system performance standards.

The proposed licence clause is shown in Box 8.1.

Box 8.1 Proposed interpretation of standards clause

5.4 Interpretation of Standards

5.4.1 In the case of any ambiguity in the interpretation or application of the Water Continuity Standard, the Water Pressure Standard, the Wastewater Overflow Standard or clause 5.2.5, IPART’s interpretation or assessment of the standard or clause will prevail.

8.4 Amend water continuity standard based on results of Sydney Water's optimisation model

Stakeholders generally supported our preliminary view to amend the water continuity standard so its level reflects customers' preferences and their willingness to pay. As noted above, to help identify this level, we did further analysis using an optimisation model we developed for this purpose. At the same time, Sydney Water developed its own optimisation model to determine its proposed level for this standard.

We propose to accept Sydney Water's proposed water continuity standard because it was developed using an optimisation model that took account of the value customers place on the level of service, and the costs and performance of its water supply network. Our own optimisation model produced similar results, which confirms the reasonableness of Sydney Water's proposal.

8.4.1 Sydney Water's optimisation model took account of value customers place on level of service

Sydney Water submitted its proposal for the water continuity standard on 7 November 2018, and this proposal is available on our website.⁵⁴ In developing its proposal, it engaged with customers and undertook cost-benefit analysis of different options for the standard.

Sydney Water commissioned the Centre for International Economics (CIE) to undertake a customer survey. We consider this survey is reliable and of good quality. Its results captured both customers' willingness to pay for a higher standard and willingness to accept (compensation) for a worsening standard. We have also incorporated CIE's survey results in our optimisation model (discussed further below).

Sydney Water's engagement work indicates that customer preferences and associated willingness-to-pay support an improvement to service levels. Of the options it analysed, two are likely to deliver a net benefit for customers:

- ▼ improved notification of water service interruption to customers, and
- ▼ new equipment that allows main to be repaired under pressure, with no interruption to service.

Sydney Water proposed to set the target level for the water continuity standard at 31,680 properties (in absolute number of properties affected), with a tolerance band of 6,930 properties (also in absolute number of properties affected). The upper bound of this band would be at 38,610 properties and lower bound would be at 24,750 properties.

We have summarised Sydney Water's proposal in Table 8.3 below, and also expressed it in number of properties that meet the standard per 10,000 properties (in line with our draft recommendation 35, discussed above). We calculated the tolerance band to be +/- 40 properties (in number of properties that meet the standard per 10,000 properties).

⁵⁴ Letter to IPART, Mr Philip Davies, Head of Regulatory Economics, Sydney Water, 7 November 2018.

Table 8.3 Sydney Water proposed performance level for water continuity standard

Measure of performance (in any financial year)	Calculation	Value
No. of properties that do not meet the standard	Revised value after optimisation	31,680
No. of properties that meet the standard	$1,980,000 - 31,680$	1,948,320
Target: No. of properties per 10,000 properties	$(1,948,320 / 1,980,000) * 10,000$	9,840
Lower band: No. of properties per 10,000 properties	$(1,980,000 - (31,680 + 6,930)) / 1,980,000 * 10,000$	9,800 (rounded)
Upper band: No. of properties per 10,000 properties	$(1,980,000 - (31,680 - 6,930)) / 1,980,000 * 10,000$	9,880 (rounded)

Note: Sydney Water used 1,980,000 connections as the base in its proposal dated 7 November 2018. We rounded the calculated values to the nearest 10.

8.4.2 IPART's optimisation model supports Sydney Water's proposal

Our optimisation model⁵⁵ indicated that the optimal target level for the water continuity standard is approximately 37,000 per year (using the 'willingness to accept' valuations in the model) and 48,700 per year (using the 'willingness to pay' valuations in the model). The existing standard is 40,000 properties per year.

In our optimisation model, we adopted the optimal target level from the 'willingness to accept' valuations even though it represents a (very slight) improvement in quality.⁵⁶ We consider the optimal target level from 'willingness to accept' valuations is appropriate (ie, 37,000 properties per year, equivalent to a target of 9,798 properties⁵⁷ per 10,000 that meet the standard). This optimal number is comparable to the target level proposed by Sydney Water (31,700 properties per year), and on this basis we support Sydney Water's proposal. We also support the tolerance band that Sydney Water proposed. We consider applying a tolerance band is appropriate to account for:

- ▼ natural variations in outcomes due to weather variation, and
- ▼ uncertainty in the optimisation model results, given the novelty of the approach and uncertainties in certain inputs.

8.4.3 We propose to draft the licence obligation to avoid encouraging over-compliance

We consider that in the event that Sydney Water's performance is **better than** the tolerance band of the water continuity standard (ie, more than 9,880 properties per 10,000 are unaffected by unplanned water interruptions), the licence should not encourage it to take actions to perform within the band. Sydney Water considered this could avoid creating incentives for perverse behaviour and unnecessary customer inconvenience.

⁵⁵ Sydney Water provided us with data from its customer engagement work and to allow us to model Sydney Water's network characteristic and management practices. We were also able to estimate data that Sydney Water did not have available, particularly on costs, by referring to our 2015 expenditure review of Sydney Water conducted on our behalf by Atkins Cardno.

⁵⁶ Adopting 'willingness to pay' would lead to a worsening of quality.

⁵⁷ See Table 8.2.

To address this concern, we propose to draft the licence obligations to allow for a less intrusive approach to compliance if Sydney Water's performance is better than the tolerance band (ie, more than 9,880 properties per 10,000 are unaffected by unplanned water interruptions). However, we would consider the prudence and efficiency of any over-performance compared to the tolerance band in our review of Sydney Water's prices. In addition, we propose to draft licence obligations to require Sydney Water to meet the upper tolerance band. This means if Sydney Water's performance **is worse than** the tolerance band of the water continuity standard (ie, less than 9,800 properties per 10,000 are unaffected by unplanned water interruptions), it would be non-compliant with its licence.

Draft recommendations

- 37 Amend the water continuity standard to set a target level and a tolerance band for single event unplanned water interruptions that last for more than five continuous hours.
- 38 Set the target level for the water continuity standard to 9,840 properties per 10,000 properties that do not experience unplanned water interruptions that each lasts for more than five continuous hours.
- 39 Set the tolerance band for the water continuity standard to +/- 40 properties, which equates to a lower bound of 9,800 properties per 10,000 properties, and an upper bound of 9,880 properties per 10,000 properties that are unaffected by unplanned water interruptions that each lasts for five or more continuous hours.

The proposed licence clauses are shown in Box 8.2.

Box 8.2 Proposed Water Continuity Standard clauses

5.1 Water Continuity Standard

5.1.1 Sydney Water must ensure that, in each financial year, at least 9,800 Properties per 10,000 Properties (in respect of which Sydney Water provides a Drinking Water supply service) receive a Drinking Water supply service unaffected by an Unplanned Water Interruption (the **Water Continuity Standard**).

5.1.2 Sydney Water must design, construct, operate and maintain its water supply system with the objective of achieving in each financial year:

- a) the Water Continuity Target; and
- b) the Water Continuity Tolerance Band.

5.1.3 For the purposes of clause 5.1.2:

- a) the **Water Continuity Target** is that, in any financial year, 9,840 Properties per 10,000 Properties (in respect of which Sydney Water provides a Drinking Water supply service) receive a water supply service unaffected by an Unplanned Water Interruption; and
- b) the **Water Continuity Tolerance Band** is the band of deviations from the Water Continuity Target between:
 - i the mandatory Water Continuity Standard (specified in clause 5.1.1 above); and
 - ii an upper bound of 9,880 Properties per 10,000 Properties (in respect of which Sydney Water provides a Drinking Water supply service) in each financial year receiving a Drinking Water supply service unaffected by an Unplanned Water Interruption.

5.1.4 Sydney Water must use the best available data (taking account of water pressure data, where available) to determine whether a Property has experienced an Unplanned Water Interruption.

5.1.5 If a Property experiences an Unplanned Water Interruption that was caused by a Third Party or a power failure, the Property is taken not to have experienced an Unplanned Water Interruption for the purposes of this clause 5.

5.1.6 For the purpose of the Water Continuity Standard, Water Continuity Target and Water Continuity Tolerance Band:

- a) each separately billed part of a Multiple Occupancy Property is to be counted as a separate Property; and

[Note: For example, a complex of five townhouses where each townhouse receives a separate Bill from Sydney Water is to be counted as five separate Properties. However, a block of five flats that only receives one Bill from Sydney Water is to be counted as a single Property.]

- b) each separate instance, in a financial year, of a single Property experiencing an Unplanned Water Interruption is to be counted as a separate Property that has experienced an Unplanned Water Interruption.

8.5 Amend water continuity standard to remove standard for multiple unplanned water interruptions

The existing water continuity standard includes a measure for multiple unplanned interruptions (see Table 8.1). We propose removing the repeat event measure from the water continuity standard, but maintaining the repeat event measure as an IPART performance indicator to monitor the trend on multiple interruption events.

We have insufficient information to model the effect of repeat water continuity failures (ie, repeat unplanned interruption events). While in theory, we could consider multiple events by multiplying the probability of single events, we understand that repeat occurrences are not independent events. Rather, failures tend to be clustered because of common causes (usually either asset condition or soil conditions). It is difficult to quantify the correlation between repeated failures at the same location.

Sydney Water considered that there would be minimal impact on the number of repeat interruptions experienced by customers as a result of the change in the level of the water continuity standard.⁵⁸

Draft recommendation

- 40 Remove the repeat event measure from the water continuity standard, but maintain the repeat event measure as an IPART performance indicator to monitor the trend on multiple interruption events.

8.6 Amend water pressure standard threshold to focus on longer, repeat events

The existing water pressure standard is that no more than 6,000 properties experience a water pressure failure in any financial year. To form our proposed position, we reviewed the water pressure information from Sydney Water and the results of Sydney Water's recent customer engagement survey. We also considered Sydney Water's proposal on this standard and other stakeholder comments.

8.6.1 Sydney Water proposed replacing the existing standard with performance indicators that reflect customer preferences

Sydney Water proposed removing the existing obligations to meet the one-off 15-minute standard from the licence, and instead requiring it to measure and report on its performance against two new performance indicators:

- ▼ number of longer duration (one hour) water pressure failure events, including repeats, in any financial year, and
- ▼ number of properties that experience repeat water pressure failure events (12 or more events per year).

Sydney Water based its proposal on the results of its customer engagement - which indicate that its customers consider water pressure to be a relatively unimportant area of performance

⁵⁸ Letter to IPART, Mr Philip Davies, Head of Regulatory Economics, Sydney Water, 7 November 2018.

- and the fact that most low pressure events recorded each year are repeat events.⁵⁹ It considered that its proposed indicators better reflected the impact on customers experiencing repeat water pressure failure.

The only other stakeholders who commented on this issue were PIAC and FRNSW. Neither supported removing the water pressure standard from the licence. However, they considered other measures could be more meaningful. FRNSW also proposed that Sydney Water be required to report on the areas of the network where water flow and pressure is low, as this affects firefighting capacity.

8.6.2 We propose to retain the standard but amend it to reflect Sydney Water's findings on customer preferences

We do not agree that the water pressure standard should be removed because we consider low water pressure is a service interruption, and because some customers face recurring issues. However, based on the findings of Sydney Water's customer survey, we agree that the existing measure does not reflect customers' perception of poor performance. To address this, we propose to:

- ▼ Revise the threshold for the water pressure standard to focus on recurring interruptions in line with the finding that Sydney Water's customers do not view that a single water pressure failure is important.
- ▼ Change the definition of water pressure failure from a duration of 15 minutes to one hour. We consider the specification of the time of day, whether it is peak or off-peak, is not necessary.
- ▼ Encourage Sydney Water to address recurring low pressure issues, but not require it to eliminate these issues.
- ▼ Not require reporting on flow and pressure as we consider this is best addressed through an alternative means to the licence.

Revise threshold for water pressure standard

We propose revising the threshold for the water pressure standard from no more than 6,000 properties that experience one water pressure failure per year, to 130 properties (equivalent to 1 in 10,000) that experience 12 or more water pressure failures per year. This change would oblige Sydney Water to operate to maintain its current number of properties affected by recurring events. It would also align with Sydney Water's customers' views that single water pressure failure⁶⁰ of short duration are less important, and would provide a more transparent measure for recurring low pressure issues. Adding a frequency of 12 or more per year to the measure should capture existing properties experiencing recurring water pressure failure (discussed further below).

We propose to revise the threshold level for water pressure standard as shown in Table 8.4 below.

⁵⁹ Sydney Water submission to IPART Issues Paper, August 2018, pp 66-70.

⁶⁰ Water pressure failure means a situation in which a Property experiences a pressure of less than 15 metres head of pressure for a continuous period of 15 minutes or more measured at the point of connection of the Property to Sydney Water's Drinking Water supply system, usually at the point of connection known as the 'main tap'. Pressure failures relating to temporary operational events such as water main breaks are excluded.

Table 8.4 Proposed performance level of the water pressure standard

Measure of performance (in any financial year)	Calculation	Value
Multiple events (12 or more water pressure failure)		
No. of properties that do not meet the standard	Revised value after review	130
No. of properties that meet the standard	1,981,000 – 130	1,980,870
No. of properties that meet the standard per 10,000 properties	$(1,980,870 / 1,981,000) * 10,000$	9,999

Note: Total number of connected properties: water (000s) = 1,981 (Sydney Water, *Operating Licence - NWI Performance Indicators Report 2017-18*, September 2018.)

Change the definition of water pressure failure

We propose changing the definition of the duration of water pressure failure from 15 minutes to one hour to reflect customers' views that short periods of low water pressure are less important. This could lead to a reduction in the number of reported pressure failures, but it is unlikely to reduce the number of reported properties experiencing recurring water pressure failure.

Sydney Water's customers indicated that the level of inconvenience to them would increase if the water pressure failure occurred at peak hours. Since we are amending the standard to focus on recurring low pressure at clusters of properties that experience frequent failures, and low pressure occurs more frequently at times of peak flow and higher demand, the timing of the failure (peak or off-peak) would most likely happen at peak hours, where demand is higher in the area. We consider specifying the time of day is not necessary in the amended standard.

Require Sydney Water to address recurring low water pressure areas

In its proposal, Sydney Water noted that about 130 properties have experienced very frequent pressure failures in six discrete locations. These locations are rural or low-density residential areas, and the properties have experienced recurring low water pressure for many decades. In most cases, they experienced water pressure failure every day during the summer of 2017-18.⁶¹ The reason for this is that the properties are either located close to the supplying reservoir and therefore at similar elevation to it, or at a high elevation to it.⁶²

With the existing properties that are affected by recurring low water pressure, we propose to add a new obligation for Sydney Water to address areas with recurring low water pressure in a way that reflects customers' willingness to pay by 31 October 2022. We understand that in early 2019 Sydney Water will gather information in a further series of customer engagement forums to validate the willingness to pay for recurring low water pressure in the context of the overall bill. Sydney Water's high-level cost estimates for addressing recurring low pressure at the six locations are \$2.6 million to \$7.3 million, depending on the technical solution adopted.⁶³ A cost-benefit analysis, informed by customers' willingness to pay and cost of providing the services, would be required to demonstrate prudent and efficient spending.

⁶¹ Sydney Water, Response to IPART Request for Information, 9 November 2018, Question 139.

⁶² Sydney Water submission to IPART Issues Paper, August 2018, p 68.

⁶³ Sydney Water, Response to IPART Request for Information, 9 November 2018, Question 144.

We consider that requiring Sydney Water to address recurring low water pressure issues by 31 October 2022 should provide sufficient time for it to evaluate its customers' willingness to pay, decide on its approach, and progressively resolve the recurring low water pressure on clusters of properties on that basis.

We do not propose imposing a requirement on Sydney Water to completely eliminate the recurring low water pressure issues because these issues are not due to the poor performance of Sydney Water's assets.

We propose to set the water pressure standard to no more than 130 properties (equivalent to 1 in 10,000 properties) that experience 12 or more water pressure failures per year, because we understand there are about 130 properties currently being frequently affected by low water pressure. Revising the water pressure standard to 130 properties should send a signal to Sydney Water to not encourage new connection of properties at locations where minimum pressure standard cannot be met.

In addition, for new properties seeking connections to Sydney Water's drinking water networks, we propose to add a new obligation for Sydney Water to review its business processes so that no new property at risk of being affected by recurring low water pressure is connected to the drinking water supply unless the owner is informed of the low water pressure and provided with options to avoid the risk of low water pressure. We consider requiring this by 30 June 2020 would provide adequate time for Sydney Water to review its processes.

Not require flow and pressure reporting

As noted above, FRNSW proposed that Sydney Water report on the areas of the network where flow occurs at less than 10 litres per second, and pressure at less than 100 kilopascals⁶⁴.⁶⁵ However, we consider that this could be addressed as part of the working group discussion, established under the memorandum of understanding between Sydney Water and FRNSW, rather than as a performance standard or reporting requirement in the licence.

Draft recommendations

- 41 Amend the threshold level of the water pressure standard to no more than 130 properties that experience 12 or more water pressure failures per year (water pressure failures can be counted once for each property per day), and amend the expression of measure to 9,999 properties per 10,000 properties that do not experience 12 or more water pressure failures per year.
- 42 Amend the definition of water pressure failure to a situation in which a Property experiences a pressure of less than 15 metres head of pressure for a continuous period of one hour or more, such head of pressure measured at the point of connection (usually the main tap) of the Property to Sydney Water's Drinking Water supply system.
- 43 Include new obligation to address the service provided to clusters of properties affected by recurring low water pressure in a manner that takes into account its customers' willingness to pay by 31 October 2022.

⁶⁴ Equivalent to approximately 10 metres head of pressure.

⁶⁵ NSW Government (FRNSW) Submission to IPART Issues Paper, September 2018, p 22.

-
- 44 Include new obligation to review business processes by 30 June 2020 to ensure that no new property at risk of being affected by recurring low water pressure is connected to the drinking water supply unless the owner is informed of the low water pressure and provided with options to avoid the risk of low water pressure.

The proposed licence clauses are shown in Box 8.3.

Box 8.3 Proposed Water Pressure Standard clauses

5.2 Water Pressure Standard

5.2.1 Sydney Water must ensure that, in each financial year, at least 9,999 Properties per 10,000 Properties (in respect of which Sydney Water provides a Drinking Water supply service) receive a Drinking Water supply service affected by fewer than 12 Water Pressure Failures (the **Water Pressure Standard**).

5.2.2 A Property is taken to have experienced a Water Pressure Failure when:

- a) a person notifies Sydney Water that the Property has experienced a Water Pressure Failure and Sydney Water confirms that the Property has experienced a Water Pressure Failure; or
- b) Sydney Water identifies that the Property has experienced a Water Pressure Failure (including through its data collection systems and hydraulic analysis).

5.2.3 A Property will not be taken to have experienced a Water Pressure Failure if that Water Pressure Failure occurred only because of:

- a) water usage in the case of a fire or other abnormal demand; or
- b) a short term or temporary operational problem (such as a main break), including where caused by a Third Party, that is remedied within four days of its commencement.

5.2.4 For the purpose of the Water Pressure Standard:

- a) where a Property experiences multiple Water Pressure Failures in a day, only one of those Water Pressure Failures is to count as a Water Pressure Failure experienced by that Property;
- b) where a Property experiences a Water Pressure Failure that affects more than one day, each day affected is to be counted as a separate Water Pressure Failure;
- c) each separately billed part of a Multiple Occupancy Property is to be counted as a separate Property;

[Note: For example, a complex of five townhouses where each townhouse receives a separate Bill from Sydney Water is to be counted as five separate Properties. However a block of five flats that only receives one Bill from Sydney Water is to be counted as a single Property.]

- d) each Property that is affected by 12 or more Water Pressure Failures in a financial year is to be counted once only as a Property that has experienced 12 or more Water Pressure Failures in that financial year; and
- e) after 30 June 2020, where a Property in, or in the vicinity of, a Property Cluster, is connected for the first time to Sydney Water's Drinking Water supply system and Sydney Water has informed the owner (at the time of connection) of:
 - i the risk of recurring Water Pressure Failures, should the Property be connected to that system; and
 - ii options to reduce the risk;that Property is not to be counted for the purposes of the Water Pressure Standard.

5.2.5 For each identified Property Cluster, Sydney Water must:

- a) by 30 June 2020, review its business processes to ensure that no Property at risk of being affected by recurring Water Pressure Failures from the same cause is connected to Sydney Water's Drinking Water supply system, unless the owner (at the time of connection) is:
 - i. informed of that risk; and
 - ii. provided with options to reduce that risk; and
- b) by 31 October 2022, take steps to minimise or eliminate the risk of recurring Water Pressure Failures from that cause, in a manner that takes into account its Customers' willingness to pay for Drinking Water supply services.

8.7 Retain wastewater overflow standard

The existing wastewater overflow standard applies in dry weather only, and consists of a measure for a single interruption and a measure for repeat interruptions. Performance against the standard is measured as no more than the number of properties that experience a wastewater overflow, excluding public properties.

Sydney Water's optimisation work to date indicates that there would not be a net benefit in changing existing service levels for dry-weather wastewater overflows. Therefore, it proposed to maintain the existing level for this performance standard.

We are not confident that we can reliably model this type of system failure to determine an optimal management approach or the likely number of affected properties per year under such an approach. We examined information from Sydney Water related to the wastewater overflow standard, but could not draw any reliable causal inferences on the relationship between its management actions, or the costs and efficacy of those actions in reducing the incidence or severity of sewer overflows.

The most common cause of these overflows in Sydney by far is tree root intrusion into the reticulated sewer network. However, there is a significant random element to these overflow events, making them hard to anticipate and deal with proactively. It is clear that weather plays a role in the incidence of problems (tree roots tend to be more aggressive in dry weather) further confounding attempts at prediction. Sydney Water appears to have already taken what steps can reasonably be taken to minimise the impact of this type of problem, given the uncertainties.

Given that we have no better information on which to base a move from the existing standard, we propose to accept Sydney Water's proposal to retain that standard, but to express it as 'per 10,000 properties' (see Table 8.5).

Table 8.5 Proposed performance level of the wastewater overflow standard

Measure of performance (in any financial year)	Calculation	Value
Single event		
No. of properties that do not meet the standard	As per existing licence cl 4.2.3	14,000
No. of properties that meet the standard	1,932,000 – 14,000	1,918,000
No. of properties that meet the standard per 10,000 properties	(1,918,000/ 1,932,000) *10,000	9,928
Multiple events (3 or more overflows)		
No. of properties that do not meet the standard	As per existing licence cl 4.2.3	175
No. of properties that meet the standard	1,932,000 – 175	1,931,825
No. of properties that meet the standard per 10,000 properties	(1,931,825/ 1,932,000) *10,000	9,999

Note: Total number of connected properties: wastewater (000s) = 1,932 (Sydney Water, *Operating Licence - NWI Performance Indicators Report 2017-18*, September 2018.)

The only other stakeholder that commented on this issue was OEH. It submitted that we should include public properties in the wastewater overflow standard measures “due to the impact of overflows on environment, biodiversity, public health and amenity including recreational access to public lands”. It also noted that an “increasing number of eco-tourism based industries rely on the perception that the natural environment is clean and safe. This change to the specifics of the measure would ensure an appropriate service.”⁶⁶

EPA is the relevant NSW regulator for discharge of wastewater to the environment. Sydney Water has existing environment protection licences (EPLs) that include requirements for wet-weather and dry-weather wastewater overflows to the environment. The system performance standards in the licence are for service interruptions to customers, as such the impact of dry-weather overflows on public properties is not included. If there is a requirement for Sydney Water to manage its environmental impact from dry-weather overflows on public properties, we consider that the EPL is the more appropriate instrument to do this. EPA could include public properties in the wastewater overflow standard in Sydney Water’s EPLs.

In addition to wastewater overflow reporting, OEH proposed Sydney Water be required to notify OEH of emergency works in National Parks. We understand Sydney Water has a range of existing documents and internal procedures that identify when notification is required for public properties, including National Parks, consistent with its legislative requirements. Sydney Water has a documented Access Agreement with OEH on works within a National Park and a Memorandum of Understanding with OEH. We consider these existing arrangements are appropriate to facilitate communications and exchange of information between Sydney Water and OEH, and a licence obligation is not required.

Therefore, we propose to retain the existing approach to exclude public properties from the wastewater overflow standard in the licence.

⁶⁶ NSW Government (OEH) Submission to IPART Issues Paper, September 2018, p 19.

Draft recommendations

- 45 Retain the threshold levels (for both single and multiple events) for the wastewater overflow standard, but amend the expression of measure to 9,928 properties per 10,000 properties that do not experience an uncontrolled wastewater overflow in dry-weather, and 9,999 properties per 10,000 properties that do not experience three or more uncontrolled wastewater overflows in dry-weather.
- 46 Continue to exclude public properties from the wastewater overflow standard.

The proposed licence clauses are shown in Box 8.4.

Box 8.4 Proposed Wastewater Overflow Standard clauses

5.3 Wastewater Overflow Standard

5.3.1 Sydney Water must ensure that, in each financial year, at least:

- a) 9,928 Properties per 10,000 Properties (in respect of which Sydney Water provides a sewerage service but excluding Public Properties) receive a sewerage service unaffected by an Uncontrolled Wastewater Overflow; and
- b) 9,999 Properties per 10,000 Properties (in respect of which Sydney Water provides a sewerage service but excluding Public Properties) receive a sewerage service affected by fewer than three Uncontrolled Wastewater Overflows,

(the Wastewater Overflow Standard).

5.3.2 A Property is taken to have experienced an Uncontrolled Wastewater Overflow when:

- a) a person notifies Sydney Water that a Property has experienced a sewage overflow, where Sydney Water later confirms that the sewage overflow is an Uncontrolled Wastewater Overflow; or
- b) Sydney Water's systems identify that a Property has experienced an Uncontrolled Wastewater Overflow

5.3.3 For the purpose of the Wastewater Overflow Standard:

- a) each Multiple Occupancy Property is to be counted as a single Property;

[Note: For example, a complex of five townhouses where each townhouse receives a separate Bill from Sydney Water is to be counted as a single Property.]

- b) for the purpose of clause 5.3.1(a), each separate instance, in a financial year, of a single Property experiencing an Uncontrolled Wastewater Overflow is to be counted as a separate Property that has experienced, in that financial year, an Uncontrolled Wastewater Overflow; and
- c) for the purpose of clause 5.3.1(b), each Property that experiences three or more Uncontrolled Wastewater Overflows in a financial year is to be counted once only as a Property that has experienced three or more Uncontrolled Wastewater Overflows in that financial year.

9 Asset Management System

As Chapter 8 noted, the fifth part of the draft amended licence – performance standards for service interruptions – also includes obligations for an asset management system. In the Issues Paper, these obligations are included in the part on the organisational systems management, which also sets out obligations for an environmental management system and a quality management system. However, as we are proposing to remove these obligations, we propose to move the asset management system clauses into the performance standards for service interruptions, as it supports the performance standards on service interruptions.

The sections below summarise our proposed positions on each of these management systems, and then discusses each position in more detail.

9.1 Summary of proposed positions on organisational management systems

In line with our preliminary view, we propose to retain the existing obligations on Asset Management System (AMS) with some amendments to update these obligations.

However, we propose to remove the existing obligations for an Environmental Management System (EMS), and Quality Management System (QMS). As other regulatory instruments and policies manage Sydney Water’s environmental performance, and other licence obligations ensure Sydney Water delivers quality products and services, we consider these obligations are not necessary or appropriate in the licence.

9.2 Retain Asset Management System obligations with some amendments

The Act does not require the licence to include obligations on an AMS. However, a robust AMS should ensure that Sydney Water meets its asset management objectives, including the performance standards for service interruptions (discussed in Chapter 8). The AMS is designed to monitor Sydney Water’s asset performance which determines its overall system performance.

Our preliminary view was that we should retain AMS obligations in the licence but update and amend them by:

- ▼ replacing the International Standard with the current Australian Standard
- ▼ removing obligations to certify and maintain certification of its AMS, to notify IPART of proposed significant changes to its AMS, and completed transitional clauses, and
- ▼ removing the Assets Reports and replacing it with a requirement to provide a one-off Strategic Asset Management Plan.

Only two stakeholders commented on the AMS. Sydney Water supported our preliminary view. It noted that managing its assets effectively is critical to being able to provide high-quality services to its customers. It agreed that maintaining certification of its AMS is

appropriately an internal business decision, but also noted this certification provides benefits to Sydney Water, its customers and the regulator for a relatively low cost. Sydney Water⁶⁷ also supported replacing the State of the Assets report with a copy of its Strategic Asset Management Plan⁶⁸. Hunter Water noted that its licence contains similar clauses to our preliminary view and that it has experienced no issues with these clauses.⁶⁹

Our cost-benefit analysis found that retaining licence obligations to maintain an AMS was likely to have a net positive benefit (see Appendix A). This is because we rely on the AMS to monitor the performance of Sydney Water against its system performance standards, and for compliance and enforcement actions. Further, we currently check the biennial State of the Assets Report and use it to inform the scope of our audits. We consider the Strategic Asset Management Plan will allow us to achieve the same outcome.

Given the above, we maintain our preliminary view. We consider that Sydney Water's AMS plays a key role in meeting its overall system performance and is crucial for identifying and pre-empting issues that may pose a significant risk to asset integrity and/or public health.

Without a robust AMS, there is limited ability to identify the root cause of poorly performing assets. If there was a high-risk incident or a non-compliance, we would be able to readily audit Sydney Water's AMS to identify the cause of the issue, make recommendations to rectify the non-compliance or take enforcement action.

We consider AMS obligations are essential for compliance monitoring and enforcement of systems performance and water quality obligations.

Draft recommendation

- 47 Retain the requirement to maintain an Asset Management System and:
 - replace references to the International Standard with the Australian Standard
 - remove the obligation to certify AMS, and
 - remove the obligation to report to IPART on significant changes that Sydney Water proposes to make to the AMS.
- 48 Replace the reporting of the biennial State of the Assets Report with a one off Strategic Asset Management Plan by 1 September 2019 or another date approved by IPART.

⁶⁷ Sydney Water submission to IPART Issues Paper, August 2018, p 20.

⁶⁸ Under the Australian asset management standard, AS ISO 55001:2014, the organisation shall develop a Strategic Asset Management Plan (SAMP) which includes documentation of the role of the asset management system in supporting achievement of the asset management objectives.

⁶⁹ Hunter Water submission to IPART Issues Paper, August 2018, p 10.

The proposed licence clauses are shown in Box 9.1.

Box 9.1 Proposed asset management system clauses

5.5 Asset Management

5.5.1 Sydney Water must maintain a Management System in relation to Sydney Water's Assets that is consistent with the Australian Standard AS ISO 55001:2014 Asset management – Management systems – Requirements (the **Asset Management System**).

5.5.2 Sydney Water must ensure that the Asset Management System is fully implemented and that all relevant activities are carried out in accordance with the Asset Management System.

9.3 Remove Environmental Management System obligations

The Act does not require the licence to include obligations on EMS. However, Sydney Water's principle objectives include protecting the environment by conducting its operations in compliance with the principles of ecologically sustainable development and preventing the degradation of the environment.

9.3.1 Stakeholders support Sydney Water maintaining an EMS, but not necessarily a licence obligation

Sydney Water, Hunter Water and EPA supported Sydney Water maintaining an EMS:

- ▼ Sydney Water submitted that it supported maintaining an EMS regardless of whether there is a licence obligation. Sydney Water considered its EMS provides a high level of assurance to customers, regulators and stakeholders.⁷⁰
- ▼ EPA also supported Sydney Water maintaining an EMS and stated that “it ensures organisation wide consideration of environmental principles. This includes consideration of environmental objectives beyond EPA licence requirements relating to pollution”.⁷¹ EPA does not specifically require Sydney Water to have an EMS, however it stated that EPA's risk-based licensing system provides licensees of environment protection licences with a financial incentive through discounted fees for maintaining an EMS certified to ISO 14001 or any other demonstrated equivalent system.
- ▼ Hunter Water noted its licence contains a requirement to maintain and implement an EMS to the current Australian Standards and that no issues have arisen with the application of these clauses.⁷²

Stakeholders that responded to the Issues Paper do not rely on the EMS obligations in the existing licence.

⁷⁰ Sydney Water submission to IPART Issues Paper, August 2018, p 78.

⁷¹ NSW Government (EPA) submission to IPART Issues Paper, September 2018, p 20.

⁷² Hunter Water submission to IPART Issues Paper, August 2018, p 11.

9.3.2 We consider EMS obligations duplicate other environmental regulation with no additional benefit

We do not rely on the EMS to monitor Sydney Water's environmental performance. This is because EPA is the NSW environment regulator, and Sydney Water is subject to more specific environmental obligations under a range of NSW laws and regulatory instruments. We consider licence obligations for Sydney Water to maintain an EMS duplicates the regulatory role of EPA. Further, EPA already provides a financial incentive for Sydney Water to maintain a certified EMS.

Our cost-benefit analysis shows that Sydney Water saved between \$4.7 million and \$8.1 million over the past five years by having a certified EMS through EPA's financial incentives. We consider these financial incentives would motivate Sydney Water to maintain an EMS even if the licence did not require it. The incentives far outweigh Sydney Water's costs of \$25,568 per annum for maintaining an EMS. Our cost-benefit analysis concludes that imposing an obligation in the licence to maintain an EMS is redundant because Sydney Water would maintain an EMS even if the licence did not require it. Therefore, the requirement would fail a CBA because it would generate compliance costs with no additional benefit (see Appendix A).

Sydney Water submitted that if the existing EMS requirements were removed it would continue to maintain a certified EMS and publically report on progress against its Environment Strategy and Environment Plan. It also submitted that there would be no significant benefits from removing these clauses other than greater flexibility in choosing when to report on its Environment Plan, and that there would be no change to its current costs.

Draft recommendation

- 49 Remove the requirement to maintain and certify an Environmental Management System because Sydney Water would maintain an Environmental Management System through its environmental regulatory instruments.

9.4 Remove Quality Management System obligations

The Act does not require the licence to include obligations on a Quality Management System (QMS). We introduced QMS obligations into Sydney Water's licence in 2015 to ensure that Sydney Water effectively manages its systems and assets to deliver and maintain a suitable level of service.⁷³

9.4.1 Stakeholders support Sydney Water maintaining a QMS

Sydney Water, Hunter Water and OEHL supported Sydney Water maintaining a QMS:

⁷³ IPART, Sydney Water Corporation Operating Licence End of Term Review, Water Licensing – Report to the Minister, May 2015, section 7.1

- ▼ Sydney Water supported maintaining a QMS regardless of whether there is a licence obligation. Sydney Water stated its QMS helps to manage and mitigate risks, meet regulatory requirements, generate efficiencies and continually improve to meet its customer and stakeholder expectations.⁷⁴
- ▼ OEHL considered the QMS obligations ensure Sydney Water delivers quality products and services. It considered the requirement to notify IPART of significant changes that Sydney Water propose to make to its QMS should also be retained. However, OEHL stated that it does not depend on Sydney Water having a QMS to achieve certain performance outcomes or mitigate certain risks.
- ▼ Hunter Water stated that its licence contains a requirement to maintain and implement a QMS to the current Australian Standards and that no issues have arisen with application of these clauses.

Stakeholders that responded to the Issues Paper do not rely on the QMS obligations in the existing licence.

9.4.2 We consider QMS obligations duplicate the function of other licence clauses

We do not rely on the QMS to monitor the performance of Sydney Water to deliver quality products and services to customers. We consider the QMS obligations duplicate the functions of other clauses in the licence to achieve the same outcomes, for example performance standards for water quality, performance standards for service interruptions, and customer service obligations. In the absence of QMS obligations, these other performance standards should ensure quality products and services.

Sydney Water stated that if the existing QMS requirements were removed it would continue to maintain a certified QMS. It considered there would be no significant costs or benefits to Sydney Water from the removal of these obligations. Our cost-benefit analysis shows that imposing an obligation in the licence to maintain a QMS is not the best response because it would generate compliance costs with no additional benefit.

We consider that Sydney Water is able to decide whether to maintain a QMS as a business decision, and a licence obligation on the QMS is not necessary. We consider that removing the QMS requirements from the licence should not reduce the performance of Sydney Water.

Draft recommendation

- 50 Remove the requirement to maintain and certify a Quality Management System, as it duplicates the functions of other clauses in the amended licence, which should not reduce the performance of Sydney Water.

⁷⁴ Sydney Water, Response to IPART Request for Information, 3 September 2018 Question 5.

10 Customers and consumers

The sixth part of the draft amended licence is customers and consumers. This part includes Sydney Water's obligations in relation to customer protection, including the customer contract and customer engagement. It includes clauses related to:

- ▼ the Customer Contract
- ▼ communications with customers
- ▼ financial hardship and payment assistance
- ▼ developing and implementing a family violence policy
- ▼ customer engagement
- ▼ internal complaints handling, and
- ▼ external dispute resolution.

The sections below summarise our proposed positions, and then discusses each in more detail.

10.1 Summary of proposed positions on customers and consumers

We propose that Sydney Water make a range of amendments to the Customer Contract, the terms and conditions of which must be set out in the licence. Most significantly, we propose to revise the way the Customer Contract applies to tenants to ensure they are appropriately protected but not given inappropriate responsibilities, and to adopt Sydney Water's proposed rebates.

Our proposed position on the customer and consumer obligations are to:

- ▼ amend the existing obligations in relation to how Sydney Water communicates with its customers to provide for more flexibility
- ▼ continue to allow customers to choose how they will receive their bill
- ▼ retain the financial hardship and payment assistance obligations
- ▼ include a new obligation to develop and implement a policy that supports customers experiencing family violence
- ▼ retain the existing obligation to have a Customer Council, but remove the prescriptive requirements for this council and require Sydney Water to review its Customer Council by 30 June 2020, and
- ▼ retain the existing obligations on internal complaints handling and external dispute resolution with minor amendments.

10.2 Amend the Customer Contract

We reviewed the existing Customer Contract, and Sydney Water's proposed amended Customer Contract, and considered stakeholder comments. As a result, we propose a range of relatively minor amendments.

A full summary of our proposed amendments is provided in Appendix B. Our draft Customer Contract is available from our website for stakeholder comment. Our most significant proposals are discussed below.

10.2.1 Revise the way the Customer Contract applies to tenants

We propose to amend the way the Customer Contract applies to tenants, to ensure they are appropriately protected but not given inappropriate responsibilities.

Under the Act, Sydney Water is not taken to have entered into a Customer Contract with tenants.⁷⁵ Under the existing licence Sydney Water is required to set out in the Customer Contract provisions to provide private residential tenants with payment assistance. The licence also requires that private residential tenants be considered in other areas of the Customer Contract.

We consider that although it is important to ensure tenants are provided certain protections under the Customer Contract, other provisions do not comfortably apply to both the owner and the tenant as the customer (such as maintenance responsibilities).

We propose the definition of customer in the Customer Contract be narrowed and specifically include tenants as customers for the purposes of:

- ▼ payment difficulty and assistance
- ▼ complaints and disputes
- ▼ consultation, access to information and privacy, and
- ▼ termination and variations of the Customer Contract.

Draft recommendation

- 51 Retain the existing Customer Contract licence clauses.
- 52 Amend definition of customer in the Customer Contract to specifically include that tenants will be taken as a customer for the purposes of:
 - accessing payment difficulty and assistance (for private residential tenants)
 - complaints and disputes
 - consultation, access to information and privacy, and
 - termination and variations of the Customer Contract.

⁷⁵ s 55 of the *Sydney Water Act 1994* provides that "an **owner of land** that is connected to a water main or sewer main owned by the Corporation is taken to have entered into a customer contract with the Corporation".

The proposed licence clauses are shown in Box 10.1.

Box 10.1 Proposed Customer Contract clauses

6.1 Customer Contract

6.1.1 The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided in accordance with this Licence. The Customer Contract is set out in Schedule C of this Licence.

6.1.2 Sydney Water must make a copy of the Customer Contract available to any person, free of charge:

- a) on its website for downloading; and
- b) upon request made to the Contact Centre.

6.3 Consumers

6.3.1 Sydney Water's obligations under clause 5.1 (Payment difficulties and assistance options) of the Customer Contract are extended to Private Residential Tenants as though the Private Residential Tenants were parties to the Customer Contract.

6.3.2 Sydney Water's obligations under the following clauses of the Customer Contract are extended to Consumers as though the Consumers were parties to the Customer Contract:

- a) clause 6.5 (Occupiers (tenants) may pay charges to avoid restriction or disconnection);
- b) clause 12 (If I am unhappy with the service provided by Sydney Water what can I do?);
- c) clause 13 (Consultation, information and privacy); and
- d) clause 14 (When does this contract with Sydney Water terminate?).

10.2.2 Adopt the rebates proposed by Sydney Water which are informed by its engagement with customers

Sydney Water proposed amendments to the existing rebates in the Customer Contract, which were informed by the findings its engagement with customers.⁷⁶ This engagement found that:

- ▼ Customers were generally unaware that Sydney Water applies rebates, but favour the continuation of rebates.
- ▼ Customers strongly preferred rebates to continue to be paid automatically, rather than on application, as they considered this was both fairer and easier for them.
- ▼ Non-residential customers considered they should be entitled to higher rebates than residential customers. (Where rebates are linked to the service charge, this already occurs. Sydney Water does not propose any changes to increase the value of non-residential rebates compared to residential rebates.)

⁷⁶ See 'Additional information, Rebates in Customer Contract 26 September 2018' on our website.

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- ▼ Customers consider Sydney Water should try to find ways of directing rebates to occupants rather than property owners. (Sydney Water is not proposing changes to do this, mainly due to a lack of information about occupants. This information is not readily provided to Sydney Water, whereas property owner information is. It would be costly for Sydney Water to actively seek information about occupants and to identify when occupants change.)
 - ▼ Customers consider a boil water alert as the most inconvenient event of those surveyed. Wastewater overflows and unplanned interruptions were also identified as having a high level of inconvenience. Planned interruptions, dirty water events and water pressure failure had a lower level of inconvenience according to the customer survey results.

We consider that rebates should be provided for events that cause inconvenience to customers, and should be set at a level proportionate with the extent of inconvenience. We propose to adopt the rebates proposed by Sydney Water as they are consistent with this view. A summary of Sydney Water's proposed rebates and our views is provided in Table 10.1.

Draft recommendation

53 Adopt the rebates proposed by Sydney Water in the Customer Contract.

Table 10.1 Overview of rebates proposed by Sydney Water

Event	Existing rebate	Proposed rebate	Reasons given by Sydney Water	Our view
Planned interruption >5 hours	\$35	\$20	Reduced to reflect less inconvenience compared to an unplanned interruption, due to notice provide to customer.	We support this proposal and recommend amending this rebate.
Unplanned interruption >5 hours	\$35	\$40	Increased by \$5. Customers indicated lengthy unplanned water interruptions to be a highly inconvenient event.	We support this proposal and recommend amending this rebate.
Repeat unplanned interruptions >1 hour (in a 12-month period)	Water service charge, paid after three events	Water service charge, paid after three events About \$80	Maintained as a refund of service charge. Discussion in the small to medium business groups particularly supported this rebate, as it is relative to the meter size.	We support this proposal and recommend retaining this rebate. We note customers indicated repeat unplanned water interruptions as highly inconvenient (however this was based on three events >3 hours in a 12-month period).
Wastewater overflow onto private property	\$60	\$75	Value increased by \$15 to reflect customer sentiment. The value is now nearly twice that of an unplanned interruption rebate.	We support this proposal and recommend amending this rebate.
Repeat wastewater overflows onto private property (in a 12-month period)	Wastewater service charge paid after two events Varies for non-residential	Increasing rebate on sliding scale: 2 events - \$150 3 or more events – wastewater service charge About \$600 for residential Varies for non-residential	Wastewater service charge, paid after three events. Customers indicated that wastewater overflows were among the most inconvenient events and deserved higher rebates. When the proposed approach was put to customer engagement forum participants 84% indicated support. This approach also received high support from small to medium sized business owners.	We support this proposal and recommend amending this rebate.
Water pressure failure > fifteen minutes (excludes operational-related failures, eg due to main breaks)	\$35 (paid once per quarter)	\$40 (paid once per quarter)	Increased by \$5 Sydney Water originally proposed a more significant change to this rebate based on feedback from its Phase 1 customer engagement. However, this change would involve significant structural changes to Sydney Water's billing and reporting systems to implement	We recommend amending this proposal to pay rebate where the water pressure failure is greater than 1 hour rather than 15 minutes. This is consistent with the higher level of inconvenience identified by customers for a 1 hour event, and reflects our recommendation for a change to the water pressure standard.

Event	Existing rebate	Proposed rebate	Reasons given by Sydney Water	Our view
		Equivalent to \$160 over 12-months for customers experiencing recurring water pressure failure (repeat events). This is about twice the water service charge.	<p>Therefore, Sydney Water is proposing to retain the rebate for individual water pressure failures, paid once per quarter.</p> <p>Sydney Water recommends the duration of the event that is eligible for a rebate should be aligned with the system performance standard.</p>	<p>We support on balance the rebate value for this proposal as it will ensure those customers affected by recurring low pressure continue to receive a similar level of compensation as under the existing Customer Contract for the inconvenience (equivalent to twice the water service charge).</p> <p>However, we note that the value of a single event rebate does not reflect its relative inconvenience compared to some other events. We understand there would be substantial cost for an update to Sydney Water's billing system if the Customer Contract were to require Sydney Water to only pay rebates for multiple events (eg, four times or more per quarter).</p>
Dirty water event (usually due to sediment in pipes after maintenance)	\$35	\$40	<p>Increased by \$5</p> <p>There was some customer sentiment in qualitative feedback that this should increase; however, in the ranking exercise this event rated as roughly the same value as an unplanned water interruption.</p>	We support this proposal and recommend amending this rebate.
Boil water alert/s issued by NSW Health for water quality incident (one rebate per incident)	\$35	\$50	<p>Increased to reflect customer sentiment and potential duration</p> <p>Customers rated this event very highly. Due to the nature of these types of events, the value of this rebate has a significant financial impact on Sydney Water, in the very rare case that a boil water alert may occur.</p>	We support this proposal and recommend amending this rebate.

10.3 Amend obligations on how Sydney Water communicates with its customers to provide more flexibility

In our Issues Paper, we indicated our preliminary view was to update the existing obligations on how Sydney Water communicates with its customers, for example by removing references to specific communications such as newspapers, pamphlets and inserts. While most stakeholders – including Sydney Water, Hunter Water and EWON – supported this view, they also considered the licence obligations should ensure Sydney Water can choose the most appropriate form of communication.⁷⁷

Sydney Water and EWON also considered that it is important that consumers, including tenants, continue to receive some notices such as restriction or disconnection notices. PIAC stated that while it is cost-effective and better for the environment to have as many communications as possible in electronic form, the reality remains that this may not be appropriate or suitable for many in the community.⁷⁸

We understand Sydney Water already encourages customer uptake of electronic forms of communication for customers that receive electronic bills. However, its current practice for providing disconnection or restriction notices to customers includes a hand-delivered notice, to ensure the affected occupant receives the notice, and so can intervene and prevent a disconnection or restriction.⁷⁹

After considering stakeholder submissions, we have revised our preliminary view. We now propose that in addition to publishing information on its website, the licence should provide flexibility to allow Sydney Water to select the most appropriate communication form chosen by the customer or that is likely to receive the public's attention in its area of operations.

Draft recommendation

- 54 Amend customer information obligations to require Sydney Water to:
- publish information on its website
 - publish information in a manner that is likely to come to the attention of the public, and/or
 - provide information directly to customers on request.

⁷⁷ Sydney Water submission to IPART Issues Paper, August 2018, p 21; Hunter Water submission to Issues Paper, August 2018, p 11; EWON submission to Issues Paper, August 2018, p 2.

⁷⁸ PIAC submission to Issues Paper, August 2018, p 6

⁷⁹ Sydney Water response to IPART's request for information, 2 October 2018, Question 57.

The proposed licence clauses are shown in Box 10.2.

Box 10.2 Proposed communication and information clauses

6.2 Providing information to Customers

6.2.1 Sydney Water must prepare a pamphlet that:

- a) provides a brief explanation of the Customer Contract;
- b) summarises the key rights and obligations of Customers under the Customer Contract;
- c) refers to the types of account relief available for Customers experiencing financial hardship;
- d) outlines the rights of Customers to claim a rebate and the conditions that apply to those rights;
- e) contains information regarding how to contact Sydney Water by telephone, email or post; and
- f) contains information regarding the ability of a Customer to enter into agreements with Sydney Water separate to the Customer Contract for the provision by Sydney Water of Services to the Customer.

6.2.2 Sydney Water must update the pamphlet to reflect any variations made to the Customer Contract.

6.2.3 Sydney Water must:

- a) provide the pamphlet and any updates, free of charge to:
 - i Customers at least annually with their Bills; and
 - ii any person upon request made to the Contact Centre; and
- b) make the pamphlet and any updates publically available on its website, free of charge, within 60 days of the commencement of the Customer Contract or any pamphlet update.

6.2.4 Sydney Water must publish on its website and advertise at least annually in a manner that Sydney Water is satisfied is likely to come to the attention of members of the public, information as to:

- a) the types of account relief available for Customers experiencing financial hardship; and
- b) rights of Customers to claim rebates and the conditions that apply to those rights.

10.4 Continue to allow customers to choose how they will receive their bill

The existing license provides that Sydney Water may send bills electronically at a customer's request. In our Issues Paper, we suggested that these customer billing arrangements could be updated to further encourage electronic billing. However, this idea was not supported by stakeholders.

Some stakeholders argued that the provision of discounts for e-billing effectively penalises disadvantaged groups. PIAC noted that customers may not have regular or reliable internet and considered many of these people to be low income, vulnerable or older consumers. It

considered putting a price on Sydney Water's paper bills to be out of step with the NSW Government's current direction to protect consumers, especially vulnerable and disadvantaged consumers.⁸⁰

We note that Sydney Water does not offer a discount for switching to e-billing nor does it charge a fee for continuing to receive paper bills. Sydney Water currently promotes e-billing via different media, such as newsletters, its website and on the envelopes for paper bills.⁸¹ In the 2018 April to June quarter, 12.7% of total bills issued⁸² were electronic bills and Sydney Water states that the trend is growing.

We also note that Sydney Water's default option for billing is sending paper bills by post. This is because the account the customer has with Sydney Water is established based on the property address. Sydney Water obtains the customer name and property address from NSW Land Registry Services when customers purchase property, and cannot use e-billing as the default option as Sydney Water is not provided with the email address of the customer at that time.

We consider customers should be given the choice of how they prefer to receive their bill, which is currently allowed through the Customer Contract.⁸³ Therefore we do not propose to make any change at this stage. However, we may also consider if there is opportunity pass on the benefits of e-billing to customers in the upcoming price review.

10.5 Retain the financial hardship and payment assistance obligations

The existing licence includes a range of clauses that specify Sydney Water's obligations to maintain and fully implement a financial hardship policy and procedures and provisions for providing payment assistance to customers.

Sydney Water currently provides various forms of help to customers experiencing financial hardship, including providing flexible payment plans, providing personalised support and advice via qualified case coordinators (BillAssist), a payment assistance scheme and providing essential or emergency plumbing repairs (PlumbAssist) for customers experiencing financial hardship. On average, more than 85% of customers who use payment assistance pay off their outstanding debt. It also gives concessions to customers that own and live in their home and hold a Pensioner Concession Card or Department of Veterans' Affairs Gold Card.

PIAC submitted that it is pleased with the hardship program that Sydney Water provides, and commends Sydney Water's efforts to go to the homes of those customers it is unable to contact. ISF suggested that IPART and Sydney Water consider emulating the leadership position taken by Yarra Valley Water (a Victorian water utility) and other service providers through what has become the Thriving Communities Partnership.⁸⁴ We note that Sydney Water is a founding member of the Thriving Communities Partnership.

⁸⁰ PIAC submission to IPART Issues Paper, August 2018, p 6.

⁸¹ Sydney Water submission to IPART Issues Paper, August 2018, p 83.

⁸² Sydney Water, Response to IPART Request for Information, 2 October 2018, Question 56.

⁸³ Sydney Water Customer Contract 2015-2020, Clause 4.4.3 How bills are sent.

⁸⁴ The Thriving Communities Partnership is "a cross-sector collaboration with the goal that everybody has fair access to the modern essential services they need to thrive in contemporary Australia: including utilities, financial services, telecommunications and transport".

We consider the existing obligations on financial hardship and payment assistance are well designed and protect Sydney Water's customers that are experiencing financial hardship and payment difficulties regardless of their circumstances. Therefore, we propose retaining the existing obligations for financial hardship and payment assistance.

Draft recommendation

- 55 Retain the existing customer protection obligations for payment difficulties and payment assistance.

The proposed licence clauses are shown in Box 10.3.

Box 10.3 Proposed payment difficulties and payment assistance clauses

6.4 Assistance Options for Payment Difficulties and Actions for Non-Payment

6.4.1 Sydney Water must maintain and fully implement:

- a) a financial hardship policy that assists residential Customers experiencing financial hardship to better manage their current and future Bills;
- b) procedures relating to a payment plan for residential Customers who are responsible for paying their Bills and who are, in Sydney Water's reasonable opinion, experiencing financial hardship;
- c) procedures for identifying the circumstances under which Sydney Water may disconnect or restrict the supply of water to a Customer's Property; and
- d) provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential Customers experiencing financial hardship.

(the **Assistance Options for Payment Difficulties and Actions for Non-Payment**).

6.4.2 Sydney Water must provide, free of charge, an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment on its website and to:

- a) all residential Customers, at least annually with their Bills;
- b) residential Customers who Sydney Water identifies as experiencing financial hardship on the date that Sydney Water first identifies that the Customer is experiencing financial hardship; and
- c) any other person upon request made to the Contact Centre.

10.6 Include new obligation to develop and implement a policy that supports customers experiencing family violence

We consider that Sydney Water has a role to play in supporting customers experiencing family violence, and propose to include a new licence obligation for Sydney Water to develop and implement a family violence⁸⁵ policy.

⁸⁵ The *Family Law Act 1975* (Cth) defines 'family violence' as meaning violent, threatening or other behaviour by a person that coerces or controls a member of the person's family (the family member) or causes the family member to be fearful (s 4AB).

In the last three years, best practice in customer protection obligations and measures for essential service providers has moved towards addressing family violence. For example, in Victoria, following the state's Royal Commission into Family Violence,⁸⁶ the Essential Services Commission Victoria (ESC) consulted on implementing family violence policies in the Victorian water sector.⁸⁷ The ESC's consultation reinforced the importance of water businesses recognising, in the case of family violence, that a utility's handling of personal information can directly affect a customer's safety. Further, customers experiencing family violence need to be confident that their personal information is secure and not at risk of deliberate or inadvertent disclosure to anyone associated with the perpetrator of abuse. The ESC's consultation also identified that perpetrators of family violence often avoid responsibility for debts, and leave their partners or former partners with substantial liabilities. The ESC received feedback that debt incurred through jointly held accounts was one of the most difficult issues for victims to resolve with financial institutions.

As a result of its consultation, the ESC updated its Customer Service Code in 2017, to require Victorian water utilities to implement a family violence policy that includes:⁸⁸

- ▼ protecting private and confidential customer information
- ▼ facilitating access to payment difficulty programs
- ▼ minimising the need for customers to disclose information such as, family violence repeatedly, and
- ▼ making customer referrals to specialist services.

We consider this approach is an appropriate response to support customers experiencing family violence, including Sydney Water's customers. We understand Sydney Water has a range of measures to identify, support and protect customers who experience family violence.

We consider Sydney Water's current business practices are already progressing towards improved customer protection in line with best practice and propose that the licence be updated to reflect this, and require Sydney Water to develop and implement a family violence policy.

Draft recommendation

- 56 Require Sydney Water to develop and implement a family violence policy by 1 July 2020, that includes:
- protecting private and confidential customer information
 - facilitating access to payment difficulty programs
 - minimising the need for customers to disclose information such as, family violence repeatedly, and
 - making customer referrals to specialist services.

⁸⁶ The Royal Commission into Family Violence's recommendations were made in March 2016.

⁸⁷ Essential Services Commission, 'Moving Towards Better Practice – Implementing family violence in the Victorian water sector', May 2017.

⁸⁸ Essential Services Commission, 'Moving Towards Better Practice – Implementing family violence in the Victorian water sector', May 2017 p4; changes to customer service codes for water businesses were part of the Essential Services Commission's response to one of the 227 recommendations from the Royal Commission into Family Violence.

The proposed licence clauses are shown in Box 10.4.

Box 10.4 Proposed family violence policy clauses

6.5 Family Violence Policy

6.5.1 Sydney Water must develop and implement a family violence policy by 1 July 2020 (or another date approved by IPART).

6.5.2 The family violence policy must, at a minimum, provide for:

- a) the protection of private and confidential Customer information;
- b) access to payment difficulty programs;
- c) processes that minimise the need for Customers to repeatedly disclose their family violence; and
- d) processes for Customer referrals to specialist services.

10.7 Amend obligations for customer engagement

The existing licence includes a range of obligations for customer engagement, all of which relate to the Customer Council. In our Issues Paper, we put the preliminary view that obligations for the Customer Council should enable Sydney Water to effectively engage with its customers in ways that are relevant, representative, proportionate, objective, clearly communicated and accurate, and considered that the existing obligations do not do this.

We also put preliminary views that:

- ▼ the existing obligations on the composition of the Customer Council should be amended to require experts in customer engagement, as this would enable Sydney Water to engage in a way that is representative of its entire customer base including groups or individuals representing diverse views.
- ▼ the existing obligations on the role of the Customer Council should be amended to include both:
 - obtaining advice on and representing the interests of Sydney Water’s customers on key issues related to Sydney Water’s planning and operations (similar to existing clause 5.5.2), and
 - providing advice to Sydney Water on its customer engagement strategies and the use of those strategies in making level of service and business planning decisions.

After considering stakeholder comments, we have revised these views. We are now proposing to retain obligations for a Customer Council (as this is a requirement under the Act) but:

- ▼ remove the prescriptive requirements for the Customer Council, and
- ▼ require Sydney Water to review its Customer Council by 30 June 2020.

10.7.1 Retain obligations for a Customer Council

Of the stakeholders who commented on the Customer Council, only FRNSW supported our preliminary views. Most stakeholders – including Sydney Water, DPE, PIAC, ISF, TEC and ICS – did not agree with these views. Instead, they referred to other recognised models and frameworks for customer engagement. However, in general they did not consider that these models should replace Sydney Water’s existing Customer Council.

Sydney Water agreed with our principles for customer engagement, but stated that its preference is to not impose licence obligations to do this. It preferred the licence to be flexible in allowing Sydney Water to decide how and when to directly engage with customers as an internal business decision.

Sydney Water did not support requiring Customer Council members to be customer engagement experts. It considered that Customer Council membership based on customer engagement experts could create conflicts of interest in recruiting for providers, may be difficult to achieve in practice, and is likely to incur greater costs. It considered that expertise in customer research and engagement methods can be gained from the use of an expert service provider. Sydney Water stated that its preference is for the licence to adopt a “light-handed regulatory approach, that allows Sydney Water to determine members as it sees fit.”⁸⁹

Sydney Water agreed that the existing Customer Council is not the most effective way to engage directly with its customers. However, it proposed to retain the Customer Council largely as is, with a name change to Community Advisory Council (we discuss this proposal further in section 10.7.3 below). Sydney Water considered that the Council plays an important advisory role to Sydney Water, particularly in representing views on behalf of the customers and community groups they represent.

Sydney Water also recognised that there are several models used for customer representative forums, however they did not support the Customer Council having a directive role or being solely constituted of customer engagement experts.

In light of Sydney Water and other stakeholder views, we propose to largely retain the existing obligations in relation to the Customer Council.

10.7.2 Remove prescriptive requirements for the Customer Council

However, to allow Sydney Water to better engage with its customers, we propose to remove the prescriptive requirements for the membership of the Customer Council and the Customer Council Charter. We consider that removing these requirements will give Sydney Water flexibility to determine membership and seek advice on issues as determined by Sydney Water and the Customer Council.

We also propose to remove the requirement to make Customer Council meeting minutes publicly available on Sydney Water’s website, but retain the obligation to provide meeting minutes upon request. Sydney Water notes that there is very little public interest in accessing

⁸⁹ Sydney Water submission to IPART Issues Paper, August 2018, p 98.

these minutes, with very few members of the public accessing copies of the minutes through its website.⁹⁰

10.7.3 Require Sydney Water to review its Customer Council

We consider effective customer engagement should be relevant, representative, proportionate, objective, clearly communicated and accurate. While we acknowledge that Sydney Water currently achieves effective customer engagement through other project-specific activities, we consider that there are benefits to improving Sydney Water's Customer Council for the purpose of customer engagement. We propose that Sydney Water should be required to review the effectiveness of its Customer Council and explore potential frameworks or models that will enable more effective customer engagement.

The costs of Sydney Water maintaining its Customer Council are low, approximately \$8,000 - \$10,000 per year (\$40,000 to \$50,000 over the term of the licence). Sydney Water estimates that conducting a review of the effectiveness of its existing Customer Council using an experienced research or consultancy proponent would have high-level costs of \$150,000.

We envisage that a review of the effectiveness of the existing Customer Council would cost less than what Sydney Water has estimated. We consider that it is not necessary to require members of the Customer Council to be interviewed on their input, or the community groups represented by members to be mapped (as included in Sydney Water's cost estimate). Rather, it should include, but not be limited to, an assessment of the Customer Council's role, objectives, outcomes and membership, to ensure Sydney Water's customer engagement through the Customer Council is relevant, representative, proportionate, objective, clearly communicated and accurate.

Despite Sydney Water's high cost estimate, we consider the review would improve customer engagement which in turn would deliver long-term benefits to customers. Given that the Act requires Sydney Water to have a Customer Council, it is worth investing in the review so that the council delivers more benefits than the current arrangement.

We consider providing one year, from the commencement of the amended licence, for Sydney Water to review and report on the review would be reasonable. Sydney Water's current customer engagement program is scheduled to be completed in February 2019. A review of the Customer Council in 2019-2020 in the context of effective customer engagement would allow Sydney Water sufficient time to reflect on their current customer engagement program and potentially introduce changes to its Customer Council.

Further, we do not propose to change the name of the Customer Council to 'Community Advisory Council' in the licence, as proposed by Sydney Water, at this time. We consider any name change should reflect the outcomes of the review. However, the licence would not prevent Sydney Water giving the Customer Council a different name.

Draft recommendations

57 Require Sydney Water to have a Customer Council that meets the requirements of the Act.

⁹⁰ Sydney Water submission to IPART Issues Paper, August 2018, p 100. The June 2017 meeting minutes have been downloaded twice, and the September 2017 meeting minutes have been downloaded five times.

- 58 Remove the prescriptive clauses related to the Customer Council.
- 59 Include a new clause requiring Sydney Water to:
 - review the existing Customer Council by 30 June 2020 to enable Sydney Water to engage with customers in ways that are relevant, representative, proportionate, objective, clearly communicated and accurate, and
 - report on the review process and outcomes by 30 June 2020 to IPART.

The proposed licence clauses are shown in Box 10.5.

Box 10.5 Proposed Customer Council clauses

6.6 Customer Council

6.6.1 Sydney Water must establish a Customer Council.

6.6.2 Sydney Water must regularly consult with its Customer Council for the purpose of achieving customer engagement with its broader customer base that is relevant, representative, proportionate, objective, clearly communicated and accurate.

6.6.3 Sydney Water must provide the Customer Council with information in Sydney Water's possession or under its custody or control necessary to enable the Customer Council to discharge the tasks assigned to it, other than information or documents that are confidential or privileged.

6.6.4 Sydney Water must keep minutes of proceedings of the Customer Council and make a copy of the minutes available to any person, free of charge, upon request made to the Contract Centre.

6.6.5 Sydney Water must undertake a review of the operation of the Customer Council. The review must include an assessment of the Customer Council's role, objectives, outcomes and membership.

6.6.6 Sydney Water must report to IPART on the completed review and its outcomes by 30 June 2020 (or another date approved by IPART).

10.8 Retain internal complaints handling and external dispute resolution obligations with minor amendments

We received submissions from Sydney Water, Hunter Water and EWON on internal complaints handling and external dispute resolution obligations.

Sydney Water stated that the operation of the dispute resolution scheme is determined by EWON, not Sydney Water. It submitted the obligation for it to prepare a pamphlet on this scheme should be amended so it is required only to explain the availability of the dispute resolution service and not the operation of EWON's services.⁹¹ EWON did not support Sydney Water's view, and stated that these requirements are not onerous and are intended to be a high level requirement only. EWON considered the pamphlet should explain both the availability and operation of the scheme.⁹²

⁹¹ Sydney Water submission to IPART Issues Paper, August 2018, p 81.

⁹² EWON submission to IPART Issues Paper, August 2018, p 3.

We agree with Sydney Water that it is not appropriate for it to be responsible for describing the operations of EWON's services, as Sydney Water may not have sufficient information on the operations of EWON's services. We consider the existing obligations for internal complaints handling and external dispute resolution should be retained. However, instead of requiring Sydney Water to describe the operation of EWON's services, we propose amending the licence so that Sydney Water is required to provide a list of the services offered by EWON. This approach better reflects Sydney Water's capacity to provide information on EWON's services.

Draft recommendation

- 60 Retain the existing internal complaints handling and external dispute resolution scheme obligations, with an amendment to replace the obligation for Sydney Water to describe EWON's operations with an obligation to list the services provided by EWON.

The proposed licence clauses are shown in Box 10.6a and 10.6b.

Box 10.6a Proposed internal complaints handling clauses

6.7 Internal Complaints handling

6.7.1 Sydney Water must maintain a procedure for receiving, responding to and resolving Complaints. The procedure must be consistent with Australian Standard AS/NZS 10002:2014 – Guidelines for complaint management in organizations (the **Internal Complaints Handling Procedure**).

6.7.2 Sydney Water must ensure that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the Internal Complaints Handling Procedure.

6.7.3 Sydney Water must provide to Customers, at least annually with their Bills, information concerning internal Complaints handling. The information must explain how to make a Complaint and how Sydney Water will receive, respond to and resolve Complaints.

6.7.4 Sydney Water must make the information concerning internal Complaints handling referred to in clause 6.7.3 available to any person, free of charge:

- a) on its website; and
- b) upon request made to the Contact Centre.

Box 10.6b Proposed external dispute resolution clauses

6.8 External dispute resolution scheme

6.8.1 Sydney Water must be a member of the Energy & Water Ombudsman NSW to facilitate the resolution of disputes between Sydney Water and its Customers and Consumers.

6.8.2 Sydney Water must:

- a) prepare a pamphlet that:
 - i lists the dispute resolution services provided by the Energy & Water Ombudsman NSW, including any right to have a Complaint or dispute referred to the Energy & Water Ombudsman NSW; and
 - ii explains how a Consumer can contact the Energy & Water Ombudsman NSW;
- b) provide a copy of that pamphlet, free of charge to Customers at least once a year with their Bills; and
- c) make a copy of that pamphlet available to any person, free of charge:
 - i. on its website; and
 - ii. upon request made to the Contact Centre.

11 Stakeholder cooperation

The seventh part of the licence includes Sydney Water's obligations in relation to cooperation with stakeholders, including requirements to have memoranda of understanding with stakeholders. The sections below summarise our proposed positions, and then discusses each in more detail.

The existing licence includes requirements for developing and/or maintaining cooperative relationships with stakeholders through memoranda of understanding (MOUs) or other instruments. In some cases, these instruments are required by the Act.

Our proposed positions on cooperative relationships with stakeholders are to:

- ▼ retain obligations for MOUs with EPA, WAMC and NSW Health, but remove the reporting obligation to NSW Health
- ▼ retain obligations for an MOU with FRNSW with some amendments, and
- ▼ remove the obligation for a Roles and Responsibilities Protocol with DPE.

11.1 Retain obligations for MOUs with EPA, WAMC and NSW Health, but remove the reporting obligation to NSW Health

The Act states that Sydney Water must enter into separate MOUs with EPA, WAMC and NSW Health as referred to in the operating licence.⁹³

Stakeholders – including EPA, OEH, NSW Health, Sydney Water, and Hunter Water supported retaining the MOU obligations. EPA stated that MOUs are an important component of the relationship between agencies, and that its MOU with Sydney Water is important in clearly defining this relationship. NSW Health considered the obligation for Sydney Water to maintain an MOU with it outlines the basis for cooperative relationships between the organisations and has been revised over time.

We did not receive a submission from WAMC or any of the agencies that undertake its functions (Department of Industry – Water, the Natural Resource Access Regulator, and WaterNSW) to our Issues Paper. The most recent feedback we have on the performance of Sydney Water with the WAMC MOU obligations is a letter from the then Department of Primary Industries - Water in August 2017 stating “DPI Water is satisfied that WaterNSW (SCA) and Sydney Water have met the conditions of their operating licences that are relevant to DPI Water”.⁹⁴

We propose to retain all existing obligations in relation to MOUs, except the obligation for Sydney Water to report incidents to NSW Health as part of its MOU obligations.

⁹³ *Sydney Water Act 1994*, ss 34, 35 and 36.

⁹⁴ Letter to IPART, Mr Frank Garafalow, Group Director Water Regulation, Department of Primary Industries – Water, IPART Operational Audit 2016-2017 – WaterNSW (State Water and SCA) and Sydney Water, 23 August 2017.

Sydney Water stated that it is happy to maintain this reporting requirement because if an incident occurs that poses a risk to public health, Sydney Water would need manage this in close consultation with NSW Health.⁹⁵ However, we propose to remove this reporting requirement as it duplicates the requirement in the reporting manual to report to NSW Health “any incident in the delivery of its Services which may adversely affect public health”.⁹⁶ Further, we consider the minimum requirements for Sydney Water to demonstrate a cooperative relationship with NSW Health already include reporting on events that may pose a risk to public health.

Draft recommendations

- 61 Retain obligations requiring MOUs with EPA and WAMC.
- 62 Retain the obligation requiring an MOU with NSW Health, but remove the requirement for the MOU to include arrangements for reporting to NSW Health information on any events that may pose a risk to public health.

The proposed licence clauses are shown in Box 11.1.

Box 11.1 Proposed Memoranda of Understanding required by the Act clauses

7.1 Memoranda of Understanding with WAMC, NSW Health & EPA

7.1.1 Sydney Water must maintain the memoranda of understanding entered into under section 35 of the Act with:

- a) the Water Administration Ministerial Corporation (**WAMC**);
- b) the Secretary of the Department of Health (**NSW Health**); and
- c) the Environment Protection Authority (**EPA**)

7.1.2 The purpose of the memoranda of understanding referred to in clause 7.1.1 is to form the basis for cooperative relationships between the parties. In particular:

- a) the purpose of the memorandum of understanding with WAMC is to recognise the role of WAMC in regulating water access, use and management and Sydney Water’s right to use water vested in WAMC;
- b) the purpose of the memorandum of understanding with NSW Health is to recognise the role of NSW Health in providing advice to the NSW Government in relation to Drinking Water quality standards and the supply of water which is safe to drink; and
- c) the purpose of the memorandum of understanding with the EPA is to recognise the role of the EPA as the environment regulator of New South Wales and to commit Sydney Water to environmental obligations.

11.2 Retain MOU obligations with FRNSW with some amendments

The Act does not require the licence to contain obligations for Sydney Water to develop and maintain a cooperative relationship with FRNSW. However, both Sydney Water and FRNSW

⁹⁵ Sydney Water submission to IPART Issues Paper, August 2018, p 101.

⁹⁶ Section 2.3, *Sydney Water Reporting Manual, Operating Licence 2015-2020*.

supported retaining licence obligations to maintain a cooperative relationship under an MOU, and considered the MOU has helped them to resolve a number of issues.

FRNSW also proposed that the working group be tasked through a prescriptive requirement in the MOU to provide IPART with a report on the investigation of the provision of firefighting flows in selected local areas. It submitted that this would ensure IPART is kept abreast of the issues associated with the provision of firefighting water, and the adoption of the voluntary funding method as part of our draft decision to set a new charge in the current review of developer charges and backlog sewerage charges for metropolitan water agencies.⁹⁷

Sydney Water proposed that the prescriptive matters the working group must consider be removed based on positive progress with FRNSW. However, FRNSW did not support this proposal at this stage.

OEM noted that both the NSW Rural Fire Service (NSW RFS) and FRNSW provide firefighting services within Sydney Water's operating area, and considered that the MOU should include consideration of NSW RFS. NSW RFS supported this proposal.⁹⁸ Sydney Water sees benefit in establishing an MOU with NSW RFS and stated that it has a long history of working collaboratively with NSW RFS, however it queried whether this needs to be a licence obligation.

Our analysis demonstrates that although it is difficult to quantify the value of accurate and timely information for firefighting, it is probable that the cost consequence of a mistake during a fire would significantly exceed the annual costs of maintaining the MOU with FRNSW. We consider that including a requirement for the MOU would provide a net benefit (see our cost-benefit analysis at Appendix A).

We have not been able to establish the benefits of requiring Sydney Water to enter into an MOU with NSW RFS. NSW RFS may not receive the same benefits from receiving frequent up-to-date information from Sydney Water. However, the existing licence does not preclude Sydney Water from entering into an MOU with NSW RFS, nor from including them in working group matters.

After considering all of the above, we propose to retain the obligation to maintain MOU obligations with FRNSW, including the matters that the working group must consider at a minimum, given the essential nature of timely data required by FRNSW.

However, we propose to remove the completed clause on establishing the MOU. We do not propose to include licence obligations for Sydney Water to enter into an MOU with NSW RFS, and we do not require a report on working group matters as proposed by FRNSW.

⁹⁷ IPART, Maximum prices to connect, extend or upgrade a service for metropolitan water agencies – Sydney Water, Hunter Water and Central Coast Council – Draft Report, June 2018.

⁹⁸ Email to IPART, Mr Ben Millington, NSW Rural Fire Service, 9 October 2018.

Draft recommendations

- 63 Retain the MOU obligations with FRNSW, including the matters that the working group must consider.
- 64 Remove the completed clause on the development of an MOU with FRNSW by 31 December 2015.
- 65 Do not require Sydney Water to report to IPART on working group matters.
- 66 Do not require Sydney Water to enter into an MOU with NSW RFS.

The proposed licence clauses are shown in Box 11.2.

Box 11.2 Proposed Memorandum of Understanding with Fire and Rescue NSW clauses

7.2 Memorandum of Understanding with Fire and Rescue NSW

7.2.1 Sydney Water must use its best endeavours to maintain a memorandum of understanding with Fire and Rescue NSW (**FRNSW**).

7.2.2 Sydney Water must use its best endeavours to comply with the memorandum of understanding with FRNSW.

7.2.3 The purpose of the memorandum of understanding with FRNSW is to form the basis for cooperative relationships between the parties. In particular, the purpose is to:

- a) develop the roles and responsibilities of the parties as they relate to each other;
- b) identify the needs and constraints of the parties as they relate to each other; and
- c) identify and develop strategies for efficient and effective provision of firefighting water consistent with the goals of each party.

7.2.4 The memorandum of understanding with FRNSW must require the maintenance of a working group and must provide that:

- a) the working group must include representatives from Sydney Water and FRNSW and may include representatives from other organisations such as the NSW Rural Fire Service; and
- b) the working group is to consider the following matters (at a minimum):
 - i. information sharing arrangements between Sydney Water and FRNSW;
 - ii. agreed timelines and a format for Sydney Water to provide a report to FRNSW detailing the network performance with regard to availability of water for firefighting (taking into account the minimum available flow and pressure in localised areas of the network);
 - iii. arrangements for Sydney Water to consult with FRNSW in the design of new assets and planning of system maintenance, where planning indicates that minimum available flow and pressure may unduly impact firefighting in the network section under consideration; and
 - iv. other matters as agreed by both Sydney Water and FRNSW.

11.3 Remove the obligation for a Roles and Responsibilities Protocol with DPE

Sydney Water and DPE supported removing licence obligations for Sydney Water to develop a Roles and Responsibilities Protocol with DPE and considered there are other mechanisms established to address specific issues and develop collaborative responses.

We have considered licence obligations for Sydney Water to cooperate with DPE specifically on water supply planning in section 6.7 of this report.

Draft recommendation

- 67 Remove the requirements to develop and maintain a Roles and Responsibility Protocol with DPE.

12 Information and services for competitors

The eighth part of the draft amended licence is information and services for competitors. This part sets out Sydney Water's obligations to provide information and services for competitors, particularly water businesses licensed under the *Water Industry Competition Act 2006* (WIC Act).

As section 5.5 discussed, the existing licence does not include specific requirements for Sydney Water to provide information or services to WIC Act licensees. The only relevant clause requires it to cooperate with WIC Act licensees seeking to establish a code of conduct. To address the risk that Sydney Water may refuse to provide WIC Act licensees with services, or provide services in a way that may not be optimum for their operations, we propose to include an obligation to provide water and sewerage services to a WIC Act licensee on request from the WIC Act licensee in the 'Obligation to make Services available' clauses (see section 5.5).

We have also considered whether it is necessary and appropriate to include further obligations in the amended licence to reduce barriers to entry and further enable competition. In our Issues Paper, we outlined several options for further obligations for stakeholder to comment including:

- ▼ obligation to negotiate the services to be provided to WIC Act licensees or potential competitors using prescribed processes and to provide timely information, supported by a dispute resolution process if negotiations failed
- ▼ obligation to provide services at minimum service standards and to negotiate services using prescribed processes if the WIC Act licensee or potential competitor required higher service standards.

We also sought qualitative data from stakeholders, especially existing WIC Act licensees, to inform our cost-benefit analysis of these options. A range of stakeholders responded, including Sydney Water, Hunter Water, AWA-WESN, City of Sydney, DPE, EWON, Open Cities and Flow Systems (the only WIC Act licensee who responded).

In the following sections, we consider licence requirements, such as negotiation and information provision, in addition to requirements for Sydney Water to provide services to WIC Act licensees,. In practice, before a 'potential competitor' becomes a WIC Act licensee, it would negotiate and seek information from Sydney Water prior to or while it applies for a licence under the WIC Act. We therefore consider it important that potential competitors are able to rely on the negotiation provisions to enable them to consider entering the market.

The sections below summarise our proposed positions, then discuss each position in more detail.

12.1 Summary of proposed positions on information and services for competitors

After considering stakeholder comments, we propose to:

- ▼ include an obligation in the licence for Sydney Water to negotiate with WIC Act licensees and potential competitors in good faith, but not to prescribe processes or specify a form of dispute resolution
- ▼ include an obligation in the licence for Sydney Water to publish up-to-date servicing information for each region, development or major system on its website on its short to medium term servicing outlook including, at the minimum:
 - current and projected demand
 - current and projected capacity constraints
 - indicative cost of servicing
 - locations where further investigation is needed
 - opportunities to investigate servicing options, and
 - assumptions.
- ▼ include in the reporting manual, a requirement for Sydney Water to report annually on the following, and make this report publicly available:
 - number of agreements established with WIC Act licensees and potential competitors
 - number of negotiations commenced with WIC Act licensees and potential competitors that did not eventuate in an agreement and the reasons for this outcome
 - type of information requested by WIC Act licensees and potential competitors in addition to information that is publicly available,
 - time taken for Sydney Water to respond to requests for provision of information or services.
- ▼ amend the existing ‘code of conduct’ clause in the licence to refer to the licence issued under the WIC Act rather than the WIC Regulation.

Stakeholders’ submissions generally supported obligations to provide timely information to inform the market. However, they provided limited quantitative data to inform a cost-benefit analysis. Stakeholders also identified a range of other issues they considered we should consider. Unfortunately, these matters related to NSW Government policy and so are outside the scope of this review.

There were no support from stakeholders for minimum services standards as they were concerned that they could be locked into standards that may not be suitable,⁹⁹ and that minimum service standards could constrain commercial negotiations.¹⁰⁰ Accordingly, we consider that setting minimum standards is not appropriate and have not analysed this further.

⁹⁹ Flow Systems submission to IPART Issues Paper, August 2018, p 8.

¹⁰⁰ Sydney Water submission to IPART Issues Paper, August 2018, p 37.

12.2 Include obligation to negotiate in good faith

As noted above, we sought comment on whether Sydney Water should be obliged to negotiate services with WIC Act licensees or potential competitors using prescribed processes, supported by dispute resolution if negotiations fail (part of Option 3 in the Issues Paper). There was little support for this obligation:

- ▼ Sydney Water submitted that it has always negotiated in good faith with WIC Act licensees and prospective wholesale customers, and has formed mutually agreed terms and conditions for utility service agreements where these have been needed. It considered that given the small number of negotiations likely to occur over the next five years, the administrative effort required to develop and oversee negotiation and dispute resolution processes for small number of negotiations may not be warranted.¹⁰¹ It also considered that dispute resolution would be better addressed outside of its licence, for example through an industry code of conduct or guidelines.
- ▼ Flow Systems indicated that it expected to negotiate another 15 agreements with Sydney Water over the next five years.¹⁰² It supported having arbitration as a mechanism for resolving disputes, and considered that the arbitrator should be an independent body similar to an Independent Market Operator in the gas market, and not IPART.

However, feedback from WIC Act licensees that we consulted directly indicated that Sydney Water could be inflexible with the terms and conditions of supplying services and negotiation could be protracted. These licensees suggested that limiting the scope of negotiation with public water utilities by imposing template pre-agreed terms and conditions could allow them to reach service agreements sooner.

12.2.1 We consider obligation to negotiate in good faith would have benefits

After further considering this issue, including stakeholder feedback, we consider there would be benefits in introducing an obligation on Sydney Water to negotiate with WIC Act licensees and potential competitors in good faith. By acting 'in good faith', we mean:

- ▼ honestly (including not providing false information or concealing material facts), and
- ▼ fairly and reasonably, having regard to the interests of the other party (but not to the extent of subordinating their own interests).

We consider this is a proportionate response, given limited support from WIC Act licensees for introducing additional requirements in relation to negotiation. We also consider that if our proposed obligations for information provision (discussed in section 12.3 below) are included, we consider there would be less need for a prescriptive negotiation process and/or a dispute resolution requirement.

An obligation to negotiate in good faith would also address WIC Act licensees' concern about the time taken to reach service agreements with Sydney Water, as we would monitor Sydney Water's compliance with this obligation. In undertaking this monitoring, we would consider the information provided by our proposed reporting requirement (discussed in section 12.4 below), as well as complaints we receive from WIC Act licensees or potential competitors. In

¹⁰¹ Sydney Water submission to IPART Issues Paper, August 2018, p 37.

¹⁰² Flow Systems submission to IPART Issues Paper, August 2018, p 9.

addition, in an operational audit of the licence, Sydney Water would be required to provide evidence that it has negotiated in good faith.

Further, the inclusion of ‘potential competitors’ in the negotiation in good faith obligation ensures that the clause does not inhibit competition by limiting the obligation to WIC Act licensees only. We expect in practice that potential competitors would negotiate with Sydney Water prior to or while they are applying for a licence under the WIC Act. To avoid a broad interpretation of ‘potential competitors’ we recommend defining the term ‘potential competitors’ in a way that captures entities who inform Sydney Water that they intend to carry out activities that would require a licence under the WIC Act.

12.2.2 We do not consider it necessary to specify the form of dispute resolution

If negotiation fails and a dispute between Sydney Water or a WIC Act licensee or a potential competitor arises, the parties do not have the ability under the WIC Act to refer the matter to arbitration unless it relates only to access to infrastructure declared under the WIC Act. The WIC Act arbitration mechanism applies only to infrastructure services, and not to, say, the supply of water as a good or the treatment of sewage.

We considered including a licence condition that would introduce an arbitration mechanism. However, we propose not to do so, for the following reasons:

- ▼ We would expect most disputes to relate to price, and our approach to regulating wholesale water and sewerage service prices provides for scheme-specific price reviews conducted at the request of either a wholesale service provider (such as Sydney Water) or a wholesale customer (such as a WIC Act licensee or potential competitor of Sydney Water).¹⁰³
- ▼ An operating licence is not an ideal legal instrument for establishing an arbitration mechanism because in the absence of an arbitration framework in legislation, it is difficult to confer rights and impose obligations on both parties,¹⁰⁴ as well as imposing constraints on the arbitrator.¹⁰⁵

There are several alternative dispute resolution approaches, not involving IPART, which could be used to resolve disputes – for example:

- ▼ **CEO meeting:** CEOs of Sydney Water and a WIC Act licensee or potential competitor could meet to discuss and try to resolve the dispute including agreeing negotiation timeframes up front.
- ▼ **Mediation:** Sydney Water and a WIC Act licensee or potential competitor could attend mediation, facilitated by an experienced mediator. The mediator could identify issues of disagreement, and assist Sydney Water and the WIC Act licensee or potential competitor to reach an agreement.

¹⁰³ Under the *Independent Pricing and Regulatory Tribunal Act 1992*, s 11.

¹⁰⁴ See, for example, Part IIIA of the *Competition and Consumer Act 2010*, Part 3 of the WIC Act and Part 4A of the IPART Act.

¹⁰⁵ For example, Part IIIA sets a time limit for decisions and prescribes matters that the ACCC, as arbitrator, must take into account. Part 3 of the WIC Act imposes similar limitations on arbitrators of WIC Act access disputes. An operating licence could not directly constrain the arbitrator in this way.

- ▼ **Non-binding expert opinion:** Sydney Water and a WIC Act licensee or potential competitor could submit their dispute to an independent expert. That independent expert would provide an opinion on the dispute but could not issue a binding determination.

These approaches are available to Sydney Water, WIC Act licensees and potential competitors when needed, provided the parties both agree to them. As no stakeholders suggested that the licence should direct Sydney Water to use any of these approaches, we consider it is not necessary.

Draft recommendations

- 68 Include an obligation on Sydney Water to negotiate with WIC Act licensees and potential competitors in good faith.
- 69 Not to specify the form of dispute resolution in the licence where WIC Act licensees and potential competitors are unable to negotiate an agreement.

The proposed licence clauses are shown in Box 12.1.

Box 12.1 Proposed negotiation clause

8.1 Negotiations with WIC Act licensees and Potential Competitors

8.1.1 Sydney Water must negotiate the provision of Services to licensees under the WIC Act and Potential Competitors in good faith.

12.3 Include obligation to provide information to WIC Act licensees and potential competitors

We also sought comment on whether Sydney Water should be obliged to provide timely information to the market (part of Option 3 in the Issues Paper). Several stakeholders¹⁰⁶ submitted that this information provision would be useful for WIC Act licensees and potential competitors to make decisions about where and when private investment could reduce the need for Sydney Water to invest in large network assets. Flow Systems commented that it has not been able to obtain the required information from Sydney Water in a timely manner, nor to get this information from the market.¹⁰⁷

Stakeholders also suggested the types of information that would be useful, including:

- ▼ servicing strategies for development areas
- ▼ investment information
- ▼ avoided cost information (eg, in maps)
- ▼ hydraulic modelling data (eg, current and projected demand, capacity constraints)
- ▼ operational data such as flow rates and water quality, and
- ▼ wastewater overflow rates.

¹⁰⁶ Stakeholders include AWA-WESN, City of Sydney, Flow Systems and Open Cities.

¹⁰⁷ Flow Systems submission to IPART Issues Paper, August 2018, p 9.

12.3.1 We consider there is a need to improve information provision but costs and benefits are unclear

Given stakeholders have expressed concerns about the lack of information on servicing strategies and forecast costs, we consider that there is a need to improve information provision to provide transparency to the market. However, the costs and benefits involved are not clear. We could not conduct a cost-benefit analysis of an information provision obligation because we did not have quantitative data to assess the benefits. We intend to seek further information between our draft and final reports.

12.3.2 We consider making existing information publicly available is a sensible way to start

We note that Sydney Water already produces several plans that contain some of the information that WIC Act licensees, potential competitors or other stakeholders have indicated might be useful. These include:

- ▼ **Growth servicing plan**, which is available on its website. This five-year plan provides planning status of each area and infrastructure that Sydney Water has committed to build in the next five years. It is generally updated annually with a rolling five-year outlook.
- ▼ **Growth servicing investment plans**, which are not publicly available as Sydney Water considers the plans commercially sensitive. These indicative 30-year plans provide current and projected demand, capacity constraints and conceptual options to address capacity constraints including indicative costs. These plans are updated every five years.
- ▼ **Integrated system plans**, which are not publicly available as Sydney Water considers the plans commercially sensitive. These indicative plans identify at trunk main or treatment plant level where further investigation is needed and opportunities to investigate servicing options. These plans are updated every four years or as required.¹⁰⁸

At this stage, we consider that requiring Sydney Water to make publicly available information that it already has on cost of servicing would be a low-cost starting-point to fill the current information gap in the market. We also consider making the information publicly available rather than provided on request would also have benefits for WIC Act licensees and potential competitors, as it would mean they can access it any time, without having to wait for Sydney Water to prepare scheme-specific information on every request.

In addition, we consider that prescribing what information that must be provided rather than including an outcomes-based obligation would ensure that relevant information is provided to the market, and provide certainty to Sydney Water and its competitors. We did consider proposing an outcome-based obligation that required Sydney Water to provide information that is of high-quality, relevant and timely. However, at this stage, we decided not to do so as it would be difficult to measure quality, relevance and timeliness initially, and would provide less certainty to the market. We consider that an outcome-based obligation for information provision is something the licence should move towards and we would consider it in a future review of Sydney Water's licence.

¹⁰⁸ Sydney Water, *Response to IPART Request for Information*, 23 October 2018, Question 124.

We note that Sydney Water has indicated that it has begun investigating what type of information could be made available to assist potential wholesale customers.¹⁰⁹ We consider the outcome of this investigation should inform and improve information provision by Sydney Water.

12.3.3 We propose to require Sydney Water to publish short to medium term servicing information

After considering all the above factors, our proposed position is to include an obligation in the licence for Sydney Water to publish its short to medium term (at least 10 years) servicing information for each region, development or major system, including:

- ▼ current and projected demand
- ▼ current and projected capacity constraints
- ▼ indicative cost of servicing
- ▼ locations where further investigation is needed
- ▼ opportunities to investigate servicing options, and
- ▼ the assumptions made in developing the servicing information.

We have specified a 10-year horizon to minimise the risks identified by Sydney Water due to the indicative nature of the information in the plans which the above information would be drawn from. Publishing servicing information for a short to medium term rather than a 20 or 30 year horizon reduces the risk of long-term speculative investment. Forecast information of less than five years would not be useful to the market as Sydney Water would already have servicing plans close to or in delivery phase, limiting the amount of avoided costs available to be realised.

Draft recommendation

- 70 Require Sydney Water to publish information on its website, by 30 June 2020, and update at least every 12 months, its short to medium term (at least ten years) servicing information for each region, development or major system, which as a minimum, include information on:
- current and projected demand
 - current and projected capacity constraints
 - indicative cost of servicing
 - locations where further investigation is needed
 - opportunities to investigate servicing options, and
 - the assumptions made in developing the servicing information.

¹⁰⁹ Sydney Water submission to IPART Issues Paper, August 2018, p 38.

The proposed licence clauses are shown in Box 12.2.

Box 12.2 Proposed Publishing of Servicing Information clauses

8.2 Publications of Servicing Information

8.2.1 Sydney Water must, by 30 June 2020 (or another date approved by IPART), publish on its website at least ten years of servicing information for each region, development or major system. The servicing information must, at a minimum, include information on:

- a) current and projected demand;
- b) current and projected capacity constraints;
- c) indicative cost of servicing;
- d) locations where further investigation is needed;
- e) opportunities to investigate servicing options; and
- f) the assumptions made in developing the servicing information,

(Servicing Information).

8.2.2 Sydney Water must update the Servicing Information published on its website at least every 12 months.

12.4 Include requirement in the reporting manual to report on negotiations with WIC Act licensees

Since we are proposing to impose new obligations on Sydney Water on services and information for competitors, including to provide new information to the market, we also propose to monitor the effectiveness of these obligations, and its compliance with them. To enable this monitoring, we propose to require Sydney Water to report on the:

- ▼ number of agreements established with WIC Act licensees or potential competitors,
- ▼ number of negotiations that commenced but did not eventuate in an agreement and provide reasons
- ▼ type of information requested by WIC Act licensees or potential competitors in addition to the information that is publicly available, and
- ▼ time taken for Sydney Water to respond to request for provision of information or services.

Draft recommendation

- 71 Include in the reporting manual a requirement for Sydney Water to report annually on the following and make this report publicly available:
- number of agreements established with WIC Act licensees and potential competitors
 - number of negotiations commenced with WIC Act licensees and potential competitors that did not eventuate in an agreement and the reasons for this outcome
 - type of information requested by WIC Act licensees and potential competitors in addition to information that is publicly available, and
 - time taken for Sydney Water to respond to requests for provision of information or services.

12.5 Amend the ‘code of conduct’ clause with correct reference

We consider the existing licence clause that requires Sydney Water to use its best endeavours to establish a code of conduct with a WIC Act licensee remains necessary and appropriate. It is necessary because in the absence of a water industry code of conduct that applies on an industry-wide basis,¹¹⁰ WIC Act licensees who have infrastructure that interconnects to Sydney Water’s infrastructure are required under the conditions of their licences to establish a code of conduct with Sydney Water.¹¹¹ The requirement for Sydney Water to use “its best endeavours” is appropriate because it is not wholly within Sydney Water’s control to establish such a code of conduct.

However, we propose to amend the existing ‘code of conduct’ licence clause to refer to the licence issued under the WIC Act rather than the WIC Regulation as the requirement for a WIC Act licensee to establish a code of conduct with the public water utility is in the licence issued under the WIC Act. The ‘code of conduct’ referred to in the WIC Regulation is an industry-wide code of conduct that would be created by the Minister.

Draft recommendation

- 72 Amend the ‘code of conduct’ licence clause to refer to the licence issued under the WIC Act rather than the WIC Regulation.

¹¹⁰ cl 25 of the *Water Industry Competition (General) Regulation 2008*, where the portfolio Minister may, by order published in the Gazette, establish a code of conduct in relation to the respective responsibilities of licensed network operators, licensed retail supplier and public water utilities. To date the Minister has not established a water industry code of conduct.

¹¹¹ WIC Act licence standard clause B10.

The proposed licence clauses are shown in Box 12.3.

Box 12.3 Proposed Code of conduct clauses

8.3 Code of conduct

8.3.1 Sydney Water must use its best endeavours to cooperate with each licensee under the WIC Act to establish a code of conduct required under a WIC Act licence.

8.3.2 Where the Minister administering the WIC Act has established a code of conduct under clause 25 of the WIC Regulation, Sydney Water will be taken to have satisfied its obligation under clause 8.3.1 by applying the code of conduct to the relevant licensee under the WIC Act.

12.6 Stakeholders identified other issues that are not part of this licence review

Stakeholders also identified a range of other issues they suggested we should consider in relation to Sydney Water's dealings with WIC Act licensees. Unfortunately, we were not able to consider these issues as they relate to NSW Government policy, and so are outside the scope of this review (and are a matter for the Government). However, we have identified these issues below.

Flow Systems and Open Cities suggested establishing an Independent Market Operator (IMO), separate to IPART, to introduce a level playing field between Sydney Water and WIC Act licensees. They submitted that an IMO would identify new growth areas best suited to market competition and oversee the infrastructure planning and servicing strategies for these areas. We consider our draft recommendations for obligations on Sydney Water to service WIC Act licensees, negotiate in good faith with WIC Act licensees and potential competitors and to provide information would improve competition and contribute to levelling the playing field.

Flow Systems and Open Cities also submitted that NSW must strengthen its commitment to moving towards zero discharge of sewage to waters, including from ocean outfalls, which is an "ultimate aim" for Sydney Water under s 27(1) of the Act. In their view WIC Act licensees can contribute to reducing discharge to waters. We note that EPA is the relevant regulator for discharge of sewage to waters in the context of protection of the environment. In contrast, the Sydney Water licence addresses dry-weather wastewater overflows in the context of service provision to customers.

Sydney Water expressed the view that the underlying barrier to competition in the water industry is the NSW Government's decision to set developer charges for water and wastewater at zero. It submitted that re-introducing developer charges may benefit competition by creating a more level playing field between incumbents and private utilities.¹¹² We note that the policy on developer charges in Greater Sydney and the Hunter areas is a matter for the NSW Government and therefore not within the scope of this review.

¹¹² Sydney Water submission to IPART Issues Paper, August 2018, p 40.

Open Cities also submitted that:

- ▼ recycled water and Integrated Water Cycle Management should be mandated as minimum standards for new growth and compel houses to connect
- ▼ competitors should be allowed to bid for water management servicing solutions and services in new growth areas
- ▼ the licence should require Sydney Water to use WIC Act licensees, to provide water for liveability including increased greening and canopy cover to mitigate urban heat island effect, and for environment flows

In our view, the WIC Act allows for competitors to provide services to new growth areas. We consider our recommendations for obligations on Sydney Water to service WIC Act licensees, negotiate in good faith with WIC Act licensees and potential competitors and to provide information would improve competition and contribute to levelling the playing field. The other matters related to NSW Government policy and so are outside the scope of our review.

Open Cities and ISF made suggestions for improving stakeholder engagement. Open Cities proposed the licence should “require Sydney Water to provide a resource to represent industry and the community so they are able to respond to reviews of Sydney Water”.¹¹³ It argued that this would lead to more meaningful engagement which in turn would lead to better outcomes for all. ISF proposed that IPART consider how to initiate and implement a resourcing mechanism in the water sector to fund representatives for industry and/or community to adequately engage in reviews. Again, while worthwhile, these suggestions relate to NSW Government policy and are therefore beyond the scope of this licence review. We continue to look for better ways to engage with stakeholders in our reviews.

¹¹³ Open Cities submission to IPART Issues Paper, August 2018, p 7.

13 Performance monitoring and reporting

The ninth part of the draft amended licence is performance monitoring and reporting. This part of the licence sets out Sydney Water's obligations in relation to performance monitoring and reporting. It includes clauses related to:

- ▼ providing information for the operational audits
- ▼ Sydney Water's reporting, and
- ▼ performance indicators related to the environment and the response times to water main breaks and leaks.

The sections below outline our proposed positions on these obligations and then discuss them in more detail.

13.1 Summary of proposed positions on performance monitoring and reporting

After considering stakeholder comments, we maintain our preliminary views that licence obligations related to performance monitoring and reporting are necessary and appropriate, and that the existing requirements should be broadly retained with amendments to improve efficiency. However, we modified our views on the existing requirement to report on water main breaks and leaks indicators.

We propose to:

- ▼ retain the existing operational audit obligations
- ▼ consolidate the existing reporting obligations
- ▼ retain the existing environment performance indicators, and
- ▼ remove the existing obligations for reporting on response times for water main breaks and leaks.

13.2 Retain the operational audit obligations

Our preliminary view was to maintain the existing obligations for Sydney Water to provide timely information for the operational audits and cooperate with IPART and the auditors to facilitate the operational audits. This view reflected our preliminary findings that:

- ▼ the Act requires licence obligations on operational audits, and
- ▼ existing operational audits are well designed as they are outcome-based.

Sydney Water and NSW Health supported this view. Sydney Water commented that it supported the risk-based approach to operational audits outlined in our Audit Guideline – Public Water Utilities. NSW Health noted that our audit process is well established and well regarded. Hunter Water did not express a view in its submission, instead noting that its licence contains similar obligations and that it has not experienced any difficulties with the practical implementation of these requirements.

Given this feedback, we maintain our preliminary view.

Draft recommendation

73 Retain the existing clauses on operational audits in the amended licence.

The proposed licence clauses are shown in Box 13.1.

Box 13.1 Proposed Operational audit clauses

9.1 Operational audits

9.1.1 Sydney Water must cooperate with an audit undertaken by IPART or an Auditor of Sydney Water's compliance with any of the following:

- a) this Licence (including the Customer Contract);
- b) the Reporting Manual; and
- c) any matters specified by the Minister,

(the **Operational Audit**).

9.1.2 For the purpose of any Operational Audit or verifying a report on an Operational Audit, Sydney Water must, within a reasonable period of receiving a request from IPART or an Auditor, provide IPART or the Auditor with all the information in Sydney Water's possession, custody or control that is necessary to conduct the Operational Audit, including any information that is reasonably requested by IPART or an Auditor.

9.1.3 For the purpose of any Operational Audit or verifying a report on an Operational Audit, Sydney Water must permit IPART or the Auditor to:

- a) access any works, premises or offices occupied by Sydney Water;
- b) carry out inspections, measurements and tests on, or in relation to, any such works, premises or offices;
- c) take on to any such premises or offices any person or equipment necessary for the purpose of performing the Operational Audit or verifying any report on the Operational Audit;
- d) inspect and make copies of, and take extracts from, any books and records of Sydney Water that are maintained in relation to the performance of Sydney Water's obligations under this Licence (including the Reporting Manual); and
- e) discuss matters relevant to the Operational Audit or any report on the Operational Audit with Sydney Water, including Sydney Water's officers and employees.

13.3 Consolidate the reporting obligations

Our preliminary view was to retain the existing obligations on reporting but consolidate these obligations to improve efficiency. This reflected our preliminary findings that while the Act does not require licence obligations on reporting, these obligations are necessary to ensure Sydney Water provides inputs to operational audits and to inform relevant stakeholders. Further, existing reporting obligations are mostly well designed, but similar reporting obligations in the existing licence can be consolidated. For example, we identified multiple obligations for reporting:

- ▼ in accordance with the reporting manual
- ▼ on system performance standards
- ▼ on performance indicators, and
- ▼ on response times for water mains breaks (an existing sub-set of performance indicators).

Four stakeholders commented on the reporting obligations and supported our preliminary view, including Sydney Water, EPA, NSW Health and Hunter Water. Therefore we propose to retain and consolidate these obligations in the amended licence.

Draft recommendation

74 Retain and consolidate the existing obligations on reporting in the amended licence.

The proposed licence clauses are shown in Box 13.2.

Box 13.2 Proposed Reporting clauses

9.2 Reporting

9.2.1 Sydney Water must comply with all of its reporting obligations set out in the Reporting Manual, including in relation to:

- a) water conservation and planning;
- b) performance standards for water quality;
- c) performance standards for service interruptions;
- d) Customers and Consumers;
- e) information and services for competitors; and
- f) performance monitoring and reporting.

9.2.3 Sydney Water must maintain sufficient record systems to enable Sydney Water to report accurately in accordance with this clause 9.2.

9.2.4 In the case of any disagreement between IPART and Sydney Water regarding the interpretation or application of any requirements of the Reporting Manual, IPART's interpretation or assessment of the application of the requirements will prevail.

13.4 Retain the environmental performance indicators

The Act requires the licence include terms or conditions requiring Sydney Water to compile indicators of the direct impact on the environment of Sydney Water's activities.¹¹⁴ The existing licence includes one clause that requires Sydney Water:

- ▼ prepare indicators of the direct impact on the environment of Sydney Water's activities (the Environmental Performance Indicators)
- ▼ monitor and compile data on the Environmental Performance Indicators
- ▼ report on the Environmental Performance Indicators in accordance with the reporting manual.

Our preliminary view was to largely retain this clause on environmental indicators but remove the requirement to report on the Environmental Performance Indicators in accordance with the reporting manual as it duplicates the existing reporting obligations.

Sydney Water and OEH (in the NSW Government submission) commented on these obligations. Sydney Water supported the use of the environmental indicators listed in the existing reporting manual, as these broadly cover its business activities that impact the environment. These performance indicators were updated recently, as a result of our 2017-18 water utility performance review.

OEH proposed Sydney Water report on additional environment performance indicators about wastewater treatment plant discharges and the number and location of wastewater overflows, with indicators covering:

- ▼ volume of treated and untreated wastewater
- ▼ enterococci concentration, and
- ▼ dissolved nitrogen and phosphorus concentrations.¹¹⁵

The existing environment performance indicators were reviewed as part of our 2017-18 water utility performance indicators review. To assess OEH's proposal, we applied the criteria we adopted in that review, using estimates provided by Sydney Water on the costs to collect the information. Based on our assessment, the benefits do not outweigh the costs of collecting the information on the indicators proposed by OEH. Further, reporting on a minimum set of indicators would meet the requirements in the Act at minimum cost (see Appendix A).

We found that the benefits of the OEH indicators are unclear while the costs to implement are significant, and therefore we concluded the benefits would not exceed these costs. Sydney Water estimates that there would be significant costs to compile and report on the indicators, in relation to the upgrade of the capacity of its systems and the ongoing costs for sampling and maintenance. For example, reporting on wastewater overflows would require the expansion of its real-time monitoring to approximately 800 additional sites and the installation of auto-sampler equipment to measure the additional water quality parameters proposed by OEH.¹¹⁶

¹¹⁴ Sydney Water Act 1994, s 14(d).

¹¹⁵ NSW Government (OEH) Submission to IPART Issues Paper, September 2018, p 21.

¹¹⁶ Sydney Water response to IPART's request for information 12 October 2018.

Detailed information on wastewater treatments plants and overflows are already collected and published as a requirement of Sydney Water's EPLs which are regulated by EPA. Although the specific indicators in the form proposed by OEH are not collected or reported on under these EPLs, EPA indicated that it considers the current sampling regime is fit for purpose in regard to the environmental assessment and licensing of wastewater treatment plants. In relation to the wastewater overflows, EPA did not oppose the indicator proposed by OEH, but considers the feasibility of collecting such information needs to be established.¹¹⁷

Based on our findings and EPA's feedback, we propose not to include these additional indicators in the licence.

Draft recommendation

- 75 Retain the requirement for Sydney Water to compile and report on environment performance indicators.
- 76 Retain the existing environment performance indicators in the Sydney Water reporting manual.

The proposed licence clauses are shown in Box 13.3.

Box 13.3 Proposed Environment Performance Indicators clauses

9.2.2 Sydney Water must:

- a) compile indicators of the direct impact on the environment of Sydney Water's activities (the **Environment Performance Indicators**). The Environment Performance Indicators must be consistent with the performance indicators specified in the Reporting Manual with an indicator number starting with 'E';
- b) monitor and compile data on the Environment Performance Indicators, including data that allows a year to year comparison of the Environment Performance Indicators; and
- c) report on the Environment Performance Indicators in accordance with the Reporting Manual.

13.5 Comprehensively address water conservation rather than require reporting on response times for water main breaks and leaks

Our preliminary view was to retain the water main breaks and leaks indicators in the reporting manual and consider the usefulness of the indicators in light of our assessment of the existing System Performance Standards.

The obligation to report on response times appears in two separate parts of the existing licence, expressly in clause 4.3.1 and also indirectly in clause 8.2.1. Therefore our preliminary view was to consolidate the reporting requirement into a reporting manual obligation. We have modified our views on the existing requirement to report on water main breaks and leaks indicators, and consider removing the requirement. We do this in the context of our recommendations in chapter 6 of this report where we address obligations on Sydney Water for water conservation.

¹¹⁷ Email to IPART, EPA, 16 October 2018.

13.5.1 Stakeholders supported retaining reporting on response times

Sydney Water and EPA supported consolidating the reporting manual obligations but also supported retaining the reporting on response times for water main breaks and leaks.

Sydney Water submitted that it should continue to report on response times to IPART as part of the set of performance indicators to improve transparency. However it noted that the report has generated low public interest on its website. It also indicated that responding to water main breaks should be driven by business decisions that minimise customer inconvenience and reduce water loss rather than being driven by meeting prescribed timeframes.

EPA indicated that there appears to a transparency benefit in maintaining the main breaks and leaks reporting due to an increasing level of community awareness of water leaks and the value of water.¹¹⁸

13.5.2 Information on response to leaks and breaks already included in water conservation report

Our cost-benefit analysis found the transparency benefit of maintaining the obligation to report on response times for water main breaks and leaks is likely to be small (see Appendix A). These benefits are difficult to confirm or quantify. For example, Sydney Water's current reporting has generated low public interest on its website.¹¹⁹ In addition, Sydney Water's historical performance against these indicators is relatively stable,¹²⁰ which suggests they are not a driver for performance. As result, we consider these benefits are not likely to outweigh the costs of reporting the information.

If there is a benefit to EPA in understanding response times for mains breaks for monitoring Sydney Water's environmental obligations, we consider EPA could require reporting under the EPLs that it issues to Sydney Water.

We also agree with Sydney Water's views that responding to water main breaks should be driven by its business decision and other factors including customer convenience. In addition, outcomes from Sydney Water's customer engagement indicate there is no common preference for whether to respond immediately or defer response to breaks and leaks and instead that these be assessed on a case-by-case basis.

Under the existing reporting manual, the definition of response time is measured from when Sydney Water receives notification of a break or leak to the time Sydney Water stops the loss of water. Removing the main breaks performance indicator also reflects the views raised in the customer engagement that customers typically associate a response time with the time taken to fix a break and restore supply, rather than the time to cease water loss only. We also

¹¹⁸ Email to IPART, Sarah Thompson, EPA, 9 November 2018.

¹¹⁹ Sydney Water submission to IPART Issues Paper, August 2018, p 74.

¹²⁰ Sydney Water's historical performance against the indicators have typically exceeded 90% since 2005-06 for the percentage of times Sydney Water responded to the priority main breaks and leaks within the required timeframe.

Sydney Water, *Response times – water main breaks and leaks* (2010-11 to 2016-17), at http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdk4/~edisp/dd_098119.pdf, November 2017, accessed 13 November 2018.

consider information on response to leaks and breaks is addressed in a more comprehensive approach to water conservation (discussed in chapter 6).

For these reasons, we propose to remove the existing obligation.

Draft recommendation

- 77 Remove the obligation to report on response times for water main breaks and leaks as we are comprehensively addressing water conservation through other obligations.



Appendices



A Cost-benefit analysis



A Cost-benefit analysis

We undertake a cost-benefit analysis to justify imposing licence obligations. This is consistent with the approach that we established in Chapter 2 of the draft report.

This appendix sets out the supporting cost-benefit analysis (CBA) for the obligations that we proposed in Chapters 4 to 13 of the draft report. However, there are some obligations in the draft licence that we do not discuss in this CBA report, because a quantitative CBA was not required. In these cases, the draft report contains our reasoning.

We have considered the most appropriate approach to conducting the CBA in the context of each licence obligation. Therefore, we have used several approaches, tailored to each licence condition. The mix of approaches that we have applied include a standard comparison (quantitative or qualitative) of estimated costs and benefits, economically optimising the level of standards, and drawing on other relevant CBAs to inform our decision.

This appendix explains our approach to undertaking the CBA and our findings for the following categories of licence obligations:

- ▼ Context
- ▼ Performance standards for water quality
- ▼ Performance standards for service interruptions
- ▼ Organisational systems management
- ▼ Customers and consumers
- ▼ Stakeholder relations
- ▼ Performance monitoring and reporting.

A.1 Licence context

A.1.1 Term of the licence

We discuss the term of the licence in section 4.5 in the draft report.

For this licence obligation (a 4-year term with an intention to move to 5-year terms subsequently), we cannot conduct a full CBA. Instead we show that this proposal represents the least cost among feasible options.

Licence reviews are costly for the public water utility and the regulator. Sydney Water estimated its own costs of participating in one licence review at \$2.73m.¹ IPART estimates that our costs of one licence review are approximately \$1m to 1.2m. If the licence term is reduced

¹ Sydney Water RFI response 3 September 2018, question 1.

from five to four years, then the average cost per year would be increased by 25% or around \$1m, including costs to Sydney Water and IPART.

We propose changing the licence term to 4-years in the draft amended licence, with a view to returning to five years in subsequent periods. The main alternatives to this proposal would be:

- ▼ Adopting 5-year terms now and in future
- ▼ Adopting 4-year terms now and in future.

If we were to adopt a 5-year term for this draft licence then it would expire in June 2020, which is the same time expiry date as the Sydney Water price determination. In our view, it is not practical to have the both expire on the same date for two reasons. First, simultaneous licence and price reviews in 2020 would make it difficult for stakeholders to engage in both processes at the same time. Second, it is highly desirable to establish licence conditions prior to the price review so that it is clear what services correspond to the prices.

Our proposal for a 4-year term for the draft licence with an intention to move to 5-year terms subsequently would impose lower costs on Sydney Water and IPART than the remaining alternative of adopting 4-year terms now and in the future. For this reason, we consider that our proposal better satisfies a cost-benefit analysis than any feasible alternative.

A.2 Performance standards for water quality

A.2.1 Drinking water guidelines

We discuss performance standards for drinking water quality, including drinking water guidelines, in section 7.2 of the draft report.

For this licence condition (adopting the Australian Drinking Water Guidelines (ADWG)), we conduct the CBA by adapting analysis from New Zealand by applying it to the Sydney context.

To apply cost-benefit analysis to the licence requirement that Sydney Water adopt the Australian Drinking Water Guidelines (ADWG) we engaged Sapere Research Group (Sapere) to adapt a CBA on drinking water quality undertaken in New Zealand² to the Sydney context.³ We asked NSW Health for advice on the likely incidence rates for waterborne diseases in Sydney if raw water was not treated for bacteria or protozoa. Sapere incorporated NSW Health's responses in its analysis. This information allowed us to tailor the CBA method to Sydney conditions.

² Moore, D., Black M., Valji Y. and Tooth R. (2010), Cost benefit analysis of raising the quality of New Zealand networked drinking water, report for NZ Ministry of Health. Available at <https://www.health.govt.nz/publication/drinking-water-cost-benefit-analysis>.

³ See Sapere's report *Benefits of water quality in Sydney* available on our website: <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Licensing-Sydney-Water-Corporation/2019-Review-of-the-Sydney-Water-Operating-Licence?qDh=2>

Sapere concluded:

In summary, using the change of incidence of disease assumed for the NSW Revised Scenario and the assumptions as documented, the annual per-person costs associated with reduced drinking water quality are estimated as:

- Endemic disease costs: \$131 per-person, primarily related to loss of 'productive days' associated with Campylobacteriosis and IBS
- Averting behaviour costs: immaterial outside periods of epidemic
- Chemical disease costs: assumed to be immaterial, but have allocated an additional \$0.43 per-person based on the 2010 Study
- Epidemic-related costs: \$4 per-person — an indicative estimate based on the 1998 Sydney incident.

Given the above, we recommend using a base estimate of \$135 per-person per-year for the benefits of meeting ADWG. The results from the scenarios range from \$122 per-person per-year (NSW Health Low scenario) to \$369 per-person per-year (2010 Study high scenario).

Sydney Water quantified the additional costs of water treatment to meet the ADWG: ⁴

Q: In round figures, what would be the capital cost savings to Sydney Water if the existing water treatment plants had been designed and constructed without the facility to treat for bacteria and protozoa? What annual operational cost savings would be achieved by the existing water treatment plants in that scenario? Note that we do not require precise estimates, only “ballpark” figures.

A: The treatment of microbial hazards is a fundamental reason to construct a water filtration plant. It would not be an application of good practice if a water filtration plant was constructed to deal with an isolated water quality issue (for example, aesthetics or a single category of microbial hazard such as bacterial hazards) without recognition of other major sources of risk (for example, protozoal and viral pathogens).

Under a theoretical circumstance where microbial hazards did not require treatment Sydney Water would likely have not had a compelling case to construct and operate water filtration plants at all. Accordingly, in this response we have provided data based on a theoretical circumstance where water filtration plants were not constructed and operated.

In 'ballpark' terms, we estimate that the total cost of all our water filtration plants is about \$150 million a year. This includes both opex and capex for the 'Build, Own, Operate, Transfer' plants (BOOTs) and Sydney Water owned plants.

The following estimates are based on analysis of costs for the four BOOT plants only, for the period 1996-97 to 2017-18. These plants supply over 90% of all our filtered water and represent the vast bulk of costs for this asset class. In summary:

- total payments for the BOOT plants average around \$138 million a year.
- payments to the plants cover a mix of operating and capital cost items, but initially all costs were recorded as operating expense in Sydney Water's accounts.
- Since 2010-11, Sydney Water has been progressively converting the agreements into a finance lease structure.

⁴ Sydney Water response to IPART request for information, 7 September 2018

- Using the annual finance lease charge as a proxy for underlying capital costs, around 35% of the annual payment to the BOOT plants relates to capital items, and the remaining 65% is for operational costs.

We have not undertaken separate analysis of costs for the five smaller, Sydney Water owned water filtration plants. This would have been a time-consuming exercise, for not much better information to provide a 'ballpark' figure. All dollar figures noted above are in real \$2018-19.

Dividing Sydney Water's estimate of \$150m per annum by the population of Sydney Water's area of operations, which is approximately 5 million people, we obtained an average annual cost per person of \$30.

Taking into account the benefit estimates by Sapere and the cost estimates by Sydney Water, we calculated the benefit-cost ratios (BCRs) shown in Table 1 below.

Table 1 Cost-benefit analysis of ADWG licence obligation

	Benefit	Cost	Net benefit	BCR
	\$/person/year	\$/person/year	\$/person/year	
base	135	30	105	4.5
low	122	30	92	4.1
high	369	30	339	12.3
low (in-house filtration)	116	30	86	3.9

Sources: Sapere Research Group (11 Oct 2018), Sydney Water (7 Sep 2018)

While there is some uncertainty about the health benefits, the net benefit is strongly positive in all cases considered, including the lowest benefit case. We conclude that cost-benefit analysis supports the inclusion of a requirement to meet the ADWG in the amended licence.

A.2.2 Recycled water guidelines

We discuss performance standards for recycled water quality, including recycled water guidelines, in section 7.2 of the draft report.

For this licence obligation (meeting the Australian Guidelines for Water Recycling (AGWR)) we drew on our analysis for the ADWG.

We assumed that by adopting the AGWR Sydney Water would minimise the harm from accidental consumption of recycled water due to cross-connection in plumbing at a private premise. We estimate there is a 0.1% (ie, 1 in 1,000) likelihood of a cross-connect occurring in a given year at a given premise.⁵ We use benefits consistent with those that we used for the ADWG, adjusted for the likelihood of cross-connection.

We note that while there are other pathways of harm (for example people coming into contact with playing fields irrigated with contaminated water or toxic aerosols released by flushing toilets with contaminated water), those risks are largely mitigated by restricting the uses of

⁵ Sydney Water response 1 to IPART requests for information, 3 September 2018, p 6.

recycled water. These prohibitions tend to minimise the risk of any recycled water quality problems causing harm through these alternative pathways.

We estimated the costs of meeting the AGWR by using the Sydney Water's *Rouse Hill Recycled Water Development Servicing Plan 2016*. The Rouse Hill water recycling plant serves 84,240 persons.⁶ The additional capital cost required to transform tertiary-treated wastewater into recycled water that meets the AGWR is \$7.1m.⁷ Using a 4.1% discount rate⁸ to convert that capital sum to an annuity, the unit cost of meeting the AGWR is \$3.32 per person served per year.

Table 2 below sets out the cost-benefit analysis for the AGWR licence condition, under these assumptions.

Table 2 Cost-benefit analysis of AGWR licence obligation

	Health benefit	Cost	Net benefit	Benefit-cost ratio
	\$/person/year	\$/person/year	\$/person/year	
base	0.135	3.32	-3.18	0.0
low	0.122	3.32	-3.20	0.0
high	0.369	3.32	-2.95	0.1
low-household filtration	0.116	3.32	-3.20	0.0

Sources: Sapere Research Group (2018), *Rouse Hill Recycled Water Development Servicing Plan 2016*, pp 11, 22, 24, 55.

This analysis is limited to consider only harm from cross-connection and does not include costs due to other exposure risks. The available information does not support a conclusion that the licence obligation to observe the AGWR passes a cost-benefit test. This is partly because the health benefits from improved recycled water quality are reduced by the fact that cross-connection, and therefore human consumption of recycled water, is rare. However, although the benefits delivered by the AGWR are difficult to quantify, we propose to retain this obligation.

A.2.3 Fluoridation Code

We discuss the fluoridation code obligations in section 7.6 of the draft report.

For this licence obligations (meeting the *Fluoridation Code*) we relied on CBAs from other jurisdictions.

⁶ Rouse Hill Recycled Water Development Servicing Plan 2016, p. 11.

⁷ Figure derived from tables in *Ibid*, pp 22, 24, 55.

⁸ This is the Water industry WACC derived from our August 2018 bi-annual update.

In the past 50 years, there have been numerous cost-benefit analyses conducted on drinking fluoridated water in a large number of countries.⁹ With one exception, these studies all strongly supported fluoridation of drinking water.

These studies compare the cost of adding fluoride to drinking water at water filtration plants to the public health benefits which are largely improved dental health. As there are some scale economies, one study in New Zealand¹⁰ found that for very small communities that cannot take advantage of scale economies, the net benefits may be negative. However, Sydney Water's area of operations is far above the minimum efficient scale for fluoridation.

The Moore and Poynton study in New Zealand found a benefit-cost ratio of more than 20 for fluoridation for large water filtration plants.¹¹ Their large plant estimate was based on a population served of 50,000 people, which is significantly smaller than Sydney. On this basis, we conclude that cost-benefit analysis would support this requirement for Sydney.

A.3 Performance standards for service interruptions

A.3.1 Water continuity standard

We discuss the water continuity standard obligations in section 8.4 of the draft report.

For the water continuity standard licence obligations we are relying on Sydney Water's proposed standard (based on its optimisation model), but tested it against an optimisation model that we had developed earlier.

To conduct our analysis, we established the minimum social cost taking account both of the costs to the network provider and the cost of inconvenience to customers from the expected number of service outages. To do this, we weighed the cost of increased expenditure (to reduce outages) against the benefit to customers of the reduced inconvenience from water outages.

Figure 1 below illustrates how to determine the minimum cost to society using an example of different levels of reliability. Calculating the optimal (minimum cost) point requires:

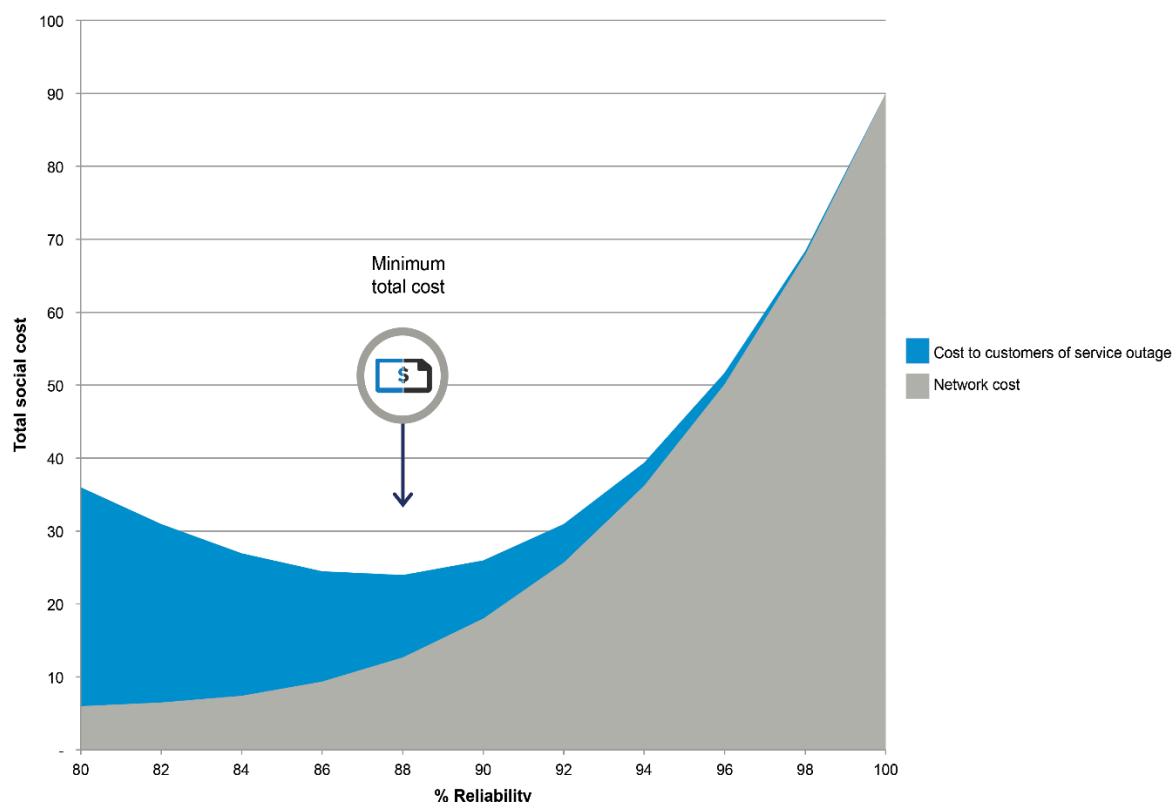
- ▼ An estimate of customer willingness to pay (ie, the value of customer reliability for water continuity), and
- ▼ Sydney Water's efficient costs and expected service outages for various feasible system management/maintenance strategies.

⁹ See, for a summary, Griffin SO, Jones K, Tomar SL, "An Economic Evaluation of Community Water Fluoridation," *Journal of Public Health Dentistry*, 2001 Spring; 61(2): 78-86.

¹⁰ Moore and Poynton, "Review of the benefits and costs of water fluoridation in New Zealand," Sapere Research Group, September 2015.

¹¹ Moore and Poynton (2015), Table 12, p 39.

Figure 1 Example of lowest net social cost for a given level of reliability



We conducted our analysis of the water continuity standard by applying an optimisation model. Our spreadsheet model, together with a description, is available on our [website](#).

In our modelling we assumed current levels of efficiency of operation and assumed that Sydney Water can make operational decisions affecting the network costs and the frequency and duration of service interruptions by choosing:

- ▼ how to manage the network¹², and
- ▼ how many work crews to make available.

Currently, Sydney Water classifies water mains with diameter of 300mm or above as critical, and these are subject to a more expensive maintenance approach (the ‘avoid fail’ approach), while water mains of lower diameter are classified as reticulation, and are subject to a cheaper approach (the ‘run to fail’ approach).¹³

In searching for a least-cost strategy, we trade-off a higher network cost per kilometre when more of the network is subject to avoid fail (because of the need to do condition assessment and more costly renewals) against lower failure rates, and less chance that a break or leak will

¹² For water mains of each type (diameter class) Sydney Water can use an ‘avoid fail’ approach, whereby monitors the condition of critical water mains. This increases the renewal cost per kilometre. Alternatively it can ‘run to fail’ where it does not monitor the condition of mains and doesn’t renew assets until three failures have occurred. This is a cheaper alternative than the avoid fail approach.

¹³ There are some water mains classified as critical even though they have smaller diameter than 300mm, because the consequences of a break or leak in those locations would be serious. There were approximately 600 km out of a total 22,000 km of water mains classified as critical with diameter less than 300mm.

lead to an interruption under the avoid fail approach. We also consider staffing levels and outage durations. When the staffing levels are higher, there is increased cost, but the duration of interruptions is shortened.

We used information provided by Sydney Water, from its customer engagement work, in relation to both a willingness to pay (for improved services) and willingness to accept (for a reduction in services). We used Sydney Water's willingness to accept prices in conducting our analysis even though they lead to a least cost strategy that represents a (very slight) improvement in quality.¹⁴ Our optimisation model suggests the optimal number of properties from 'willingness to accept' valuations is 37,000 properties. We then estimated tolerance band around that target of +/- 10,000 properties, yielding a range from 27,000 to 47,000 properties. The tolerance band accounts for:

- ▼ natural variations in outcomes due to weather variation, and
- ▼ uncertainty in the optimisation model results, given input uncertainties.

We estimate the tolerance band width at 10,000 properties because that is twice the approximate difference between the 5-year average Sydney Water performance (32,000 properties) and our target. Table 3 shows the proposed performance level and the tolerance band in numbers of properties per 1,000 properties.

Table 3 IPART's analysis of performance level of the water continuity standard

Measure of performance	Calculation	Value
No. of properties that do not meet the standard		37,000
No. of properties that meet the standard	$1,981,000 - 37,000$	1,944,000
Target: No. of properties per 1,000 properties	$(1,944,000 / 1,981,000) * 1,000$	981
Lower band: No. of properties per 1,000 properties	$(1,981,000 - (37,000 + 10,000)) / 1,981,000 * 1,000$	976
Upper band: No. of properties per 1,000 properties	$(1,981,000 - (37,000 - 10,000)) / 1,981,000 * 1,000$	986

Note: Total number of connected properties: water supply (000s) = 1,981 (Sydney Water, *Operating Licence - NWI Performance Indicators Report 2017-18*, September 2018.)

¹⁴ 'Willingness to accept' valuations are based on the idea that quality of service gets worse, and 'willingness to pay' valuations are based on the idea that quality of service gets better. Therefore, it is internally inconsistent to adopt the 'willingness to pay' valuations when they would lead the optimisation model to choose a solution involving a significant worsening of quality. It is also internally inconsistent to adopt the 'willingness to accept' valuations when they would lead to an improvement in quality, but in this case the improvement is only slight.

Sydney Water undertook its own optimisation modelling. It proposed the standard set out in Table 4.

Table 4 Sydney Water proposed performance level for water continuity standard

Measure of performance (in any financial year)	Calculation	Value
No. of properties that do not meet the standard	Revised value after optimisation	31,680
No. of properties that meet the standard	1,980,000 – 31,680	1,948,320
Target: No. of properties per 10,000 properties	$(1,948,320 / 1,980,000) * 10,000$	9,840
Lower band: No. of properties per 10,000 properties	$(1,980,000 - (31,680 + 6,930)) / 1,980,000 * 10,000$	9,800 (rounded)
Upper band: No. of properties per 10,000 properties	$(1,980,000 - (31,680 - 6,930)) / 1,980,000 * 10,000$	9,880 (rounded)

Note: Sydney Water used 1,980,000 connections as the base in its proposal dated 7 November 2018. We rounded the calculated values to the nearest 10.

The results from our optimisation modelling found the optimal number of properties affected by an interruption lasting five or more hours is approximately 37,000. This is higher than Sydney Water’s proposed standard of 31,680 properties but lower than the existing standard of 40,000 properties per year. We propose to accept Sydney Water’s proposed water continuity standard because it represents an improvement in customer outcomes relative to the existing standard. Our own optimisation model produced similar results, which confirms the reasonableness of Sydney Water’s proposal.

A.3.2 Water pressure standard

We discuss the water pressure standard obligations in section 8.6 of the draft report.

Our draft recommendations on the water pressure standard do not rely on cost-benefit analysis.

A.3.3 Wastewater overflow standard

We discuss the wastewater overflow standard obligations in section 8.7 of the draft report.

In relation to the wastewater overflow standard licence obligations, we are relying on Sydney Water’s optimisation model (which is a similar approach to Sydney Water’s optimisation approach for water continuity).

We were not able to perform an optimisation of the wastewater overflow standard because we did not have sufficient information. Sydney Water has conducted its own partial optimisation modelling, which found that the level currently specified in the existing licence leads to a lower social cost than either of the two alternatives it considered. For these reasons, we propose to retain the level of the standard for dry-weather wastewater overflow in the draft licence.

A.4 Organisational systems management

A.4.1 Asset Management System

We discuss the Asset Management System (AMS) obligations in section 9.2 of the draft report.

In relation to including an obligation to maintain an AMS, we rely on the CBA for the related primary obligations.

In our view, the benefits of having an asset management system is that the information from auditing it can inform us about how Sydney Water is performing against its performance standards (eg water continuity standards).

Sydney Water noted that it is committed to managing their assets in line with international best practice through maintaining an AMS that is aligned with or certified to ISO 55001 and it has indicated that it would continue to maintain an AMS regardless of whether there is a requirement in the licence.¹⁵ However, there may be some commercial incentives in the future for Sydney Water to cease maintaining the AMS, unless the licence requires it. Sydney Water spends \$38,760 per annum on its AMS.¹⁶ We estimate a figure of \$100,000 per annum to represent the cost savings that arise from more effective auditing that is made possible by the AMS in its current form.

We have assessed that there is likely to be a net benefit from a requirement to maintain an asset management system because the related obligations provide a net benefit. While maintaining it is presently in Sydney Water's commercial interest, it is possible that in future that may no longer be the case.

A.4.2 Environmental Management System

We discuss the Environmental Management System (EMS) obligations in section 9.3 of the draft report.

In relation to not including a requirement to maintain an EMS, we discuss the costs and quantify the benefits.

We conclude that this requirement is redundant because Sydney Water would maintain an EMS even if the licence did not require it. Therefore, the requirement would fail a CBA because it would generate compliance costs with no additional benefit.

The Environment Protection Authority (EPA) maintains its own risk-based licensing system that provides licensees of environmental protection licences with a financial incentive through discounted fees for maintaining an EMS that is certified to ISO 14001 or any other demonstrated equivalent system. Sydney Water quantified the value to them of this financial incentive.¹⁷ Over the five years to FY19, Sydney Water saved between \$4.7m and \$8.1m by having a certified EMS. These financial incentives would motivate Sydney Water to maintain

¹⁵ Sydney Water RFI response 4 September 2018.

¹⁶ See Table 8.

¹⁷ Sydney Water RFI response 10 October 2018, p 13, question 92.

an EMS even if the licence did not require it. They far outweigh Sydney Water's EMS costs of \$25,568 per annum.¹⁸

Sydney Water also noted the following points:¹⁹

Q: What would Sydney Water do differently if the existing requirements in clause 6.1 of the existing licence, relating to the Environmental Management System (EMS), were removed?

A: There would be no significant impact to Sydney Water if the existing requirements in clause 6.1 were removed, as Sydney Water would continue to maintain a certified EMS and publicly report on progress against our Environment Strategy and Environment Plan. Sydney Water recognises the value of a management system approach and has had a certified EMS in place since 2005. Our EMS provides operational efficiencies and assurance as well as ensuring we meet the objectives of our Environment Strategy.

Q: Are you able to describe and/or quantify any costs and/or benefits that would arise if these existing EMS related licence requirements were removed from the licence?

A: There would be no significant costs or benefits to Sydney Water from the removal of the existing EMS related licence requirements, other than the benefit of having greater flexibility on when we choose to publicly report on our Environment Plan.

There would be no change to our current costs as we would continue to retain a certified EMS.

As noted above for the AMS, our response assumes the approach to auditing of certified management systems as outlined in the IPART Audit Guideline would continue. That is, the independent certification or surveillance audits undertaken for our EMS would be utilised by IPART in lieu of undertaking a detailed audit of any retained environmental obligations in IPART's annual operational audit. Further costs would arise if this provision was removed.

We consider that including a requirement to maintain an EMS would fail a cost benefit analysis.

A.4.3 Quality Management System

We discuss the Quality Management System (QMS) obligations in section 9.4 of the draft report.

In relation to not including an obligation to maintain QMS, we discuss the costs and benefits.

We conclude that this requirement is redundant because Sydney Water says it would maintain a QMS even if the licence did not require it. It does not appear that there is a commercial incentive for Sydney Water to cease maintaining a QMS at some future date. Therefore, the requirement would fail a CBA because it would generate compliance costs of \$4,760 per annum with no additional benefit.²⁰

Sydney Water noted the following points:²¹

¹⁸ See Table 8.

¹⁹ Sydney Water RFI response 4 September 2018.

²⁰ See Table 8, p 24.

²¹ Sydney Water RFI response 4 September 2018.

Q: What would Sydney Water do differently if the existing requirements in clause 7.1 of the licence, relating to the Quality Management System (QMS), were removed?

A: There would be no significant impact to Sydney Water if the existing requirements in clause 6.2 were removed, as Sydney Water would continue to maintain a certified QMS. Our QMS forms the foundation upon which the organisation will integrate its enterprise management systems.

Q: Are you able to describe and/or quantify any costs and/or benefits that would arise if these existing EMS related licence requirements were removed from the licence?

A: There would be no significant costs or benefits to Sydney Water from the removal of the existing QMS related licence requirements, as Sydney Water is committed to manage its business in line with international best practice through maintaining a certified QMS.

As noted above for the AMS, our response assumes the approach to auditing of certified management systems as outlined in the IPART Audit Guideline would continue. That is, the independent certification or surveillance audits undertaken for our QMS will be utilised by IPART in lieu of undertaking an additional audit of any retained quality related requirements in IPART's annual operational audit. Further costs will arise if this provision was removed.

We consider that including a requirement to maintain a QMS would fail a cost benefit analysis.

A.5 Customers and consumers

A.5.1 Communicating and providing information to customers

We discuss the obligations for communicating and providing information to customers in section 10.3 of the draft report.

In relation to the requirement to provide certain information to customers, we rely on the CBA for the related primary obligations.

We consider that the purpose of requiring Sydney Water to inform its customers of their rights is to better enable customers to raise any issues about the quality of the service they receive either with Sydney Water, an ombudsman, or other regulatory authorities.

We have assumed that the practical effect of this requirement would be more comprehensive compliance by Sydney Water with its licence conditions. By requiring Sydney Water to disclose the information, customers would have a more detailed picture of Sydney Water's operating performance.

These obligations would pass a cost-benefit analysis because the obligations they relate to pass the cost-benefit test and the compliance costs are not high in comparison to the net benefits.

We consider that the costs of providing this customer information are low (as quantified in tables 5-8 below), so the obligation provides a net benefit.

A.5.2 Financial hardship and payment assistance

We discuss the financial hardship and payment assistance obligations in section 10.5 of the draft report.

In relation to the obligation to include a requirement to assist customers suffering hardship that makes it difficult to pay their water bills, we estimate the costs and discuss the benefits.

The benefit of hardship policies is that customers who are temporarily unable to pay their bills can continue to receive drinking water and dispose of wastewater in a sanitary way. As a result, they avoid adverse consequences for hygiene and their own health. Society avoids related adverse consequences for population health and added costs for the public health system.

The cost of hardship policies is relatively low. As long as lenient treatment of non-paying customers does not lead many customers who could pay to refuse, Sydney Water's loss is only the short-run marginal cost of supplying water to a non-paying hardship customer. As noted below, that cost is very low.

We asked Sydney Water to quantify any costs involved in hardship cases. Our questions and their answers are presented below:

Q: Please quantify any cost savings to Sydney Water if a residential customer was disconnected for non-payment? Separately, please quantify any costs Sydney Water would incur as a result of the administrative and regulatory requirements imposed on it by government relating specifically to disconnection.

A: Sydney Water's residential customers are not disconnected for non-payment; however, they may be restricted if they do not pay their bill and have received a number of debt recovery notices as specified in the Customer Contract. This includes a hand delivered 48-hour notice of pending restriction. Restriction involves reducing the flow at the water meter so that the property can still receive a very low flow of water for drinking and basic use.

Sydney Water does not restrict customers who are experiencing financial hardship, or who have entered into a payment arrangement and are honouring that arrangement.

Sydney Water rarely disconnects properties. We may disconnect a property if it poses a threat to the integrity of our water supply system such as an issue with a backflow prevention device or when no backflow prevention device is fitted. Non-residential customers are required to install and annually test their backflow prevention device.

There is no cost saving to Sydney Water for disconnection / restriction of properties for non-payment; however, it does present additional costs such as debt recovery, legal and loss of revenue. In 2017-18, Sydney Water restricted 7,213 properties or 0.4% of total properties. On average, these properties consume around 310 kilolitres of water a year, per property. Most restricted properties (around 65%) are reconnected on the same day and around 80% are reconnected within 7 days of restriction. These reconnection rates are consistent with previous years. Sydney Water restores the water supply when the customer contacts us and commits to paying their bill. This can be a full or partial payment, such as agreeing to enter into a payment arrangement.

If a restricted customer pays their outstanding charges, Sydney Water also avoids the administration cost of referring their case to our legal contractor for debt recovery.

It costs Sydney Water around \$33 (\$2018-19) for a contractor to restrict a property. This includes the delivery of the 48 hour notice and restricting the water supply at the meter. We recover some of these costs through the IPART determined 'water reconnection fee'. In 2018-19, the water reconnection fee is \$29.13. The only administrative and regulatory requirements imposed by government are Environmental Orders. Sydney Water will disconnect a customer when we receive an Environmental Order from a Local Council, for example, to close a residential brothel. Sydney Water covers the cost of this disconnection. This is typically around \$700 per disconnection; this cost can be higher if there are access issues, etc. There are a couple of these each year. (**emphasis added**)

We consider that including a requirement to assist customers suffering hardship would provide a net benefit.

A.6 Stakeholder cooperation

A.6.1 Memorandum of Understanding with EPA

We discuss the Memorandum of Understanding (MOU) obligation with EPA in section 11.1 of the draft report.

We did not perform a CBA on the MOU obligation with EPA because the content of the MOU obligation between Sydney Water and EPA does not go beyond what is required by statute.

A.6.2 Memorandum of Understanding with the Water Administration Ministerial Corporation

We discuss the MOU obligation with the Water Administration Ministerial Corporation (WAMC) in section 11.1 of the draft report.

We did not perform a CBA on the MOU with WAMC obligation because the content of the MOU obligation between Sydney Water and WAMC does not go beyond what is required by statute.

A.6.3 Memorandum of Understanding with NSW Health

We discuss the MOU obligation with NSW Health in section 11.1 of the draft report.

We did not perform a CBA on the MOU with NSW Health obligation because the content of the MOU obligation between Sydney Water and NSW Health does not go beyond what is required by statute. However, we did perform a CBA on the requirement for Sydney Water to conduct drinking water quality monitoring which we understand is part of its MOU with NSW Health, see section B7.1 below.

A.6.4 Memorandum of Understanding with Fire and Rescue NSW

We discuss the MOU obligation with Fire and Rescue NSW (FRNSW) in section 11.2 of the draft report.

In relation to including a MOU with FRNSW we have estimated the costs and discussed the benefits.

Sydney Water's costs of fulfilling the requirements of its MOU with FRNSW are relatively low. Sydney Water indicated²² this cost was \$9,520 per year for administrative support plus approximately four person-days for the representatives of each of Sydney Water and FRNSW. The total cost to Sydney Water should not exceed approximately \$20,000 per year.

The *benefit* obtained by FRNSW from the MOU is that it receives monthly updates to information from Sydney Water that it uses to:

- ▼ Maintain the currency of the ES MAPS mapping resource used by FRNSW crews on the fireground to identify where firefighting water is available
- ▼ Conduct timely inspections of fire hydrants, and
- ▼ Process applications for fire safety exemptions for certain developments.

According to FRNSW²³, if the MOU with Sydney Water was not in place, then:

The transfer of data between agencies though would not occur at the same frequency. Under the data transfer arrangements established by the WG, Sydney Water now provides data to FRNSW on a monthly basis. If required to obtain this information from the EICU this would occur on a six monthly basis. From an emergency management perspective, this would be considered to be a retrograde step as the provision of the most up to date information is considered essential to making informed operational decisions.

We asked FRNSW to elaborate on the disadvantages of receiving the information only on a six monthly basis, we received the following response:²⁴

Significant changes do occur over six months as opposed to monthly. Recent figures show a growth of some 5,000 hydrants over the last six month period while the monthly figures show a progressive change to these numbers over the same period. It must also be remembered that the processing time for the EICU to put this data into the data supplied to FRNSW could make the data as much as 7 months old including the processing time.


As previously indicated the provision of the most up to date information is considered critical in the field of emergency management, delays in the provision of real time data and information therefore has the potential to compromise FRNSW operations (and all other services that operate in this space). In its most simplest form not knowing the location of the nearest available fire hydrant has the potential to significantly delay FRNSW intervention activities which may lead to increased property and life losses. Additionally, pre incident planning activities by FRNSW can also be compromised by not having access to the most up to date information, in that, the effectiveness of any pre incident plan developed is directly related to the information available at the time of the development of the plan.

These responses from FRNSW indicate that the information obtained as a result of the MOU changes frequently enough that monthly updates are significantly better than six monthly updates. FRNSW relies on this information for firefighting activity as well as pre incident planning. While it is difficult to quantify the value of firefighters having accurate information

²² Sydney Water RFI response, 10 October 2018, p 4, question 76.

²³ 1 October 2018 response to our questions

²⁴ Email response from Mark Porter, FRNSW, 10 October 2018.



about the location and operational status of fire hydrants, it is probable that the cost consequences of a single mistake during a fire would significantly exceed the \$20,000 annual cost of the MOU.

We consider that including a requirement to for the MOU would provide a net benefit.

A.7 Performance monitoring and reporting

A.7.1 Drinking water quality monitoring and reporting

We discuss the drinking water quality monitoring and reporting obligations in section 11.2 of the draft report.

In relation to including a requirement to provide detailed real-time information about drinking water quality to the NSW Health, we conduct the CBA by adapting analysis from Chicago and applying it to the Sydney context.

In practical terms, the value of a real-time water quality information system is that when a water-borne pathogen enters the drinking water supply it is detected earlier than when the information is not available. A detection delay means more people would get sick and the costs of illness would be greater than they would otherwise have been. This avoided extra cost of illness is the value of the real-time information.

In order to quantify these avoided costs of illness, we estimated the likely progression of a disease outbreak, including that rate of growth of the number of infected individuals. We also considered the counter-measures that a public health authority can take, what they cost, how quickly they work and what types of events might trigger them. Finally, we also recognised that a public health authority must often make important decisions under uncertainty.

Box B.1 Analysing the value of providing real-time information on water quality in Chicago

We have adopted a framework used by academics²⁵ to value providing real time information on water quality based on a *Cryptosporidium* outbreak in Chicago.

Under the theoretical approach, public health authorities, suspecting a possible *Cryptosporidium* outbreak, must decide whether to issue a boil-water advice now or to wait until further water testing can be done to confirm (or refute) the existence of an outbreak. While acting now will minimise the consequences of any outbreak, there is some risk of a false alarm. On the other hand, waiting for further testing would lead to larger adverse consequences in the event of a real outbreak, but reduce the risk (and cost) of a false alarm.

Wagner et al estimated a 0.35% probability that there would be an ongoing *Cryptosporidium* outbreak on any given day.²⁶ The cost of a false alarm was the cost of bottled water consumed by half the population of the city (on the rough basis that not all of the population would be affected by the *Cryptosporidium* contamination) for the duration of the Boil Water Advice, which was assumed to be three days. That is the assumed time taken for confirmatory testing of the water supply to be completed. There would be no adverse health consequences for a false alarm.

If the Boil Water Advice is issued without any delay for confirmatory testing, and there is an outbreak, then Wagner et al estimated for their Chicago example that 235,110 individuals would get sick at a cost per sick individual of \$323 (USD 2005). In addition, there would be the costs of the Boil Water Advice for five days, which is the assumed amount of time needed to rectify the problem with the water supply.

If the Boil Water Advice is delayed by three days for confirmatory testing to take place, and there is an outbreak, then Wagner et al estimated in their Chicago example that a larger number of people would get sick (316,034). Multiplying this higher number by the cost per sick individual yields a higher negative payoff. In this case, the costs of the Boil Water Advice for five days is also incurred.

In order to apply Wagner et al's method (See Box B.1) for Sydney, we adjusted following inputs:

- ▼ cost per sick individual (from \$323 to \$840 for *Cryptosporidium*)^{27,28}
- ▼ cost of Boil Water Advice, and
- ▼ estimated number of sick individuals in case of:

²⁵ Wagner M, G Wallstrom, and A Onisko, "Issue a Boil-Water Advisory or Wait for Definitive Information? A Decision Analysis", AMIA 2005 Symposium Proceedings, 774 -778.
<https://www.ncbi.nlm.nih.gov/pubmed/16779145>

²⁶ See Wagner, et al, pp 775-776. The figure assumes one *Cryptosporidium* outbreak every 30 years, and an average outbreak duration of 38.5 days. The authors derived those estimates from prior outbreaks at North Battleford, Saskatchewan (Canada) and Milwaukee, Wisconsin (USA).

²⁷ Insert reference. Note that most of this cost is for non-medical expenses including time off work for ill people and their carers

²⁸ We have also considered Sapere estimates for a range of other acute gastrointestinal illnesses, including *Campylobacteriosis* (\$1,522 per event), *Salmonellosis* (\$1,850 per event), *STEC (VTEC)* (\$1,312 per event), *Yersiniosis* (\$670 per event), *Giardiasis* (\$923 per event), *Shigellosis* (\$900 per event), and *Norovirus* (\$160 per event).

- Boil Water Advice provided now
- Boil Water Advice delayed by three days for testing.
- ▼ Population inputs (from 5.4 million in Chicago to 5.1 million in Sydney)

We used a current estimate for an eight-pack of 1.5 litre bottled water from Coles in Sydney: \$0.53 per litre.

We estimate the value of the monitoring information to be \$4.6m per annum for *Cryptosporidium* and *Giardia* alone. However, Sydney Water's drinking water quality monitoring program would likely also detect a range of other pathogens, so the benefits is likely to be higher.

Sydney Water's estimated approximate annual cost of monitoring drinking water quality for 2018-19 is around \$4m.²⁹ This total includes the following programs:

- ▼ annual drinking water quality compliance monitoring program
- ▼ annual drinking water quality operational monitoring program
- ▼ routine *Cryptosporidium* and *Giardia* monitoring program
- ▼ event-based *Cryptosporidium* and *Giardia* monitoring program, and
- ▼ non-routine drinking water quality operational monitoring program.

It includes:³⁰

- ▼ analytical (laboratory) costs
- ▼ field services (sampling) costs, and
- ▼ client management services (monitoring design and reporting) costs.

Therefore, we conclude that there are net benefits from drinking water quality monitoring and reporting.

A.7.2 Compliance reporting

We discuss the reporting obligations for the draft amended licence, including compliance reporting, in section 13.3 of the draft report.

In relation to a requirement to provide reporting against compliance with other licence obligations, we rely on the CBA for the related primary obligations.

Sydney Water provided the following compliance and audit cost information on 10 October 2018.

²⁹ SWC response to IPART Request for Information, question 89, received 10 October 2018, pp 7-8.

³⁰ The cost of all laboratory equipment, field instruments, consumables, materials, and labour hours is included in the above, with one exception. The event-based *Cryptosporidium* and *Giardia* monitoring program involved an additional capital expenditure of around \$162,000 which was expended in the 2017-18 financial year. This item was to inform long-term planning for the microbial safety of the drinking water supply.

Table 5 Annual compliance costs borne by Sydney Water

Compliance activity	Total annual cost to Sydney Water \$
Reports to IPART	298,520
Reports to NSW Health	57,120
Reports to customers and the public	164,968
Prepare for and participate in annual operational audit	643,000

Source: Sydney Water's replies to our questions 93-96, 10 October 2018

In Tables 6, 7 and 8 below, we summarise auditing and compliance reporting costs by licence obligation, and indicate the impact these costs have on the overall net social benefit for each obligation.

Table 6 Audit costs by licence clause

Audit costs			
	\$/audit year	likely # audits in one five-year regulatory period	average \$/yr
Connection of Service	13,192	1	2,638
Pricing	9,792	3	5,875
Water Quality			
Drinking Water/ Fluoridation	106,624	5	106,624
Recycled Water	106,624	5	106,624
Water quantity	17,408	1	3,482
Assets			
AMS	27,880	5	27,880
System Performance			
Standards/ Response times	36,176	2	14,470
Customers and Consumers			
Customer Contract/ Providing information/ Consumers	29,104	1	5,821
Assistance for Payment			
Difficulties and Non-Payment	23,528	2	9,411
Customer Council	11,696	2	4,678
Complaints/ dispute resolution	20,536	2	8,214
Code of Conduct	18,224	2	7,290
Environment			
EMS	9,520	2	3,808
Environmental Indicators	23,120	2	9,248
QMS	9,520	1	1,904
Performance Monitoring	25,160	3	15,096
MoUs	22,304	4	17,843
NWI Indicators	42,160	5	42,160
Common audit costs across different categories			
Corporate Compliance	49,504	5	49,504
Site Visits	27,400	5	27,400
Site Visit Bus Cost	1,350	5	1,350
Senior Management review	7,616	5	7,616
TOTAL	638,438		478,937

Source: Sydney Water, answer to Question 96. Likely # audits based on the prior licence period.

Table 7 Compliance reporting costs by licence clause

	Reporting costs (\$/yr)		
	Reports to IPART	Reports to NSW Health	Reports to customers or public
Connection of Service			
Pricing			
Water Quality			
Drinking Water/ Fluoridation	8,432	43,520	43,520
Recycled Water		13,600	
Water quantity	12,512		
Assets			
AMS	10,880		
System Performance	65,280		
Standards/ Response times			
Customers and Consumers			
Customer Contract/ Providing information/ Consumers			121,448
Assistance for Payment Difficulties and Non-Payment			
Customer Council			
Complaints/ dispute resolution			
Code of Conduct			
Environment			
EMS	21,760		
Environmental Indicators	43,520		
QMS	2,856		
Performance Monitoring			
MoUs			
NWI Indicators	65,280		
Common audit costs across different categories			
Corporate Compliance	68,000		
Site Visits			
Site Visit Bus Cost			
Senior Management review			
TOTAL	298,520	57,120	164,968

Source: Sydney Water, answers to Questions 93, 94, 95.

Table 8 Net social benefit by licence clause

	Net social benefit \$/yr		
	Total cost of compliance auditing and reporting \$/yr	Primary licence obligation net social benefit \$/yr	Licence obligation net social benefit net of total compliance costs \$/yr
Connection of Service	2,638		
Pricing	5,875		
Water Quality	-		
Drinking Water/ Fluoridation	202,096	600,000	397,904
Recycled Water	120,224	-	- 120,224
Water quantity	15,994		
Assets	-		
AMS	38,760	100,000	61,240
System Performance			
Standards/ Response times	79,750	100,000	20,250
Customers and Consumers	-		
Customer Contract/ Providing information/ Consumers	127,269	5,000,000	4,872,731
Assistance for Payment			
Difficulties and Non-Payment	9,411		
Customer Council	4,678		
Complaints/ dispute resolution	8,214		
Code of Conduct	7,290		
Environment	-		
EMS	25,568	-	- 25,568
Environmental Indicators	52,768	-	- 52,768
QMS	4,760	-	- 4,760
Performance Monitoring	15,096		
MoUs	17,843	100,000	82,157
NWI Indicators	107,440	-	- 107,440
Common audit costs across different categories			
Corporate Compliance	117,504		
Site Visits	27,400		
Site Visit Bus Cost	1,350		
Senior Management review	7,616		
TOTAL	999,545		

Source: IPART calculations.

We conclude that these compliance reporting obligations corresponding to primary licence obligations that have a positive net benefit in their own right pass the cost-benefit analysis. However, for primary licence obligations that fail the cost-benefit test in their own right, including the obligations concerning EMS and QMS, the corresponding compliance reporting obligations do not pass.

For the primary obligations with positive net social benefits, we estimated these benefits on the following basis:

- ▼ Drinking water monitoring has a net social benefit of at least \$0.6m per annum.
- ▼ The AMS has value in that it reduces the cost to IPART and Sydney Water of identifying the assets that cause compliance issues. We estimate a figure of \$100,000 per annum to represent the cost savings in such a situation.
- ▼ The requirement to meet System performance standards has benefits to water customers. We estimate a net benefit of \$100,000 per annum based on a value of 5 cents per annum to each of 2 million Sydney Water customers.
- ▼ The requirements to provide information to customers and the public are valuable to customers and residents of Sydney. We estimate a net benefit \$5 million per annum based on a value of \$1 per resident per annum.
- ▼ We estimate that the MOU with FRNSW is more valuable to all the parties than Sydney Water's cost of \$20,000 per annum. Given the high stakes in firefighting events, we estimate a net social benefit for this MOU of \$100,000.

A.7.3 Environmental indicators

We discuss the environmental indicators obligations in section 13.4 of the draft report.

We note that the legislation requires Sydney Water to report on environmental indicators, but does not specify which indicators must be reported. Reporting on a minimum set of indicators would meet that requirement at minimum cost. The benefit is that Sydney Water is compliant with its legislative requirements. The cost is minimised by reporting on a small set of indicators. This "small report" position leads to maximum net benefit.

A.7.4 Reporting on response times for water main breaks

We discuss the response times for water mains breaks and leaks reporting obligations in section 13.5 of the draft report.

In relation to deciding to remove the reporting requirement for response times for water main breaks, we discuss the costs and benefits, but are unable to quantify them.

While the cost of meeting this requirement is positive, the benefit of imposing it is small. Sydney Water noted:³¹

We support Sydney Water continuing to respond to water main breaks and leaks as a business decision, rather than in accordance with a licence standard. This allows flexibility to choose an

³¹ Sydney Water response to Issues Paper, August 2018, pp 71, 74.

appropriate level of response that minimises inconvenience to customers, uses alternative measures to reduce water loss (where possible), and achieve cost savings by reducing overtime, rather than turning off supply to cease the break completely to meet prescribed timeframes. ...

Since we started reporting on this in 2016, we have received ten hits in total on the Sydney Water website. This seems to indicate that there may be little public benefit in continuing to report this information publicly.

EPA supported reporting on response times for water main breaks. However, EPA did not make a strong case that the reporting benefits including transparency outweigh the reporting costs. EPA's view that there is increasing community interest in this topic is not supported by Sydney Water's statement above about the lack of public demand for this information. If EPA does in future examine the response time information as part of an assessment of Sydney Water's environmental obligations (as EPA suggests it may) and considers that it would be appropriate for Sydney Water to report on response times, EPA could require such information under Sydney Water's Environmental Protection Licences which are issued by EPA.

Having considered submissions, we conclude that such a requirement would fail a cost-benefit analysis.

B Summary of proposed changes to the Customer Contract



B Summary of proposed changes to the Customer Contract

Table C1 provides a summary of our proposed changes to the Sydney Water Customer Contract. Our proposed amendments to the Customer Contract reflect our analysis of:

- ▼ the existing Customer Contract
- ▼ Sydney Water's legal obligations
- ▼ Sydney Water's proposed Customer Contract included in its response to our Issues Paper
- ▼ submissions made by stakeholders on Sydney Water's proposed Customer Contract
- ▼ submissions to the Issues Paper made by Sydney Water and other stakeholders
- ▼ information provided by Sydney Water at our request, and
- ▼ other relevant information.

In general, where we are proposing no substantive change to a clause in the Customer Contract we have not referred to the clause in Table C1. The following minor changes to the Customer Contract are not listed in Table C1:

- ▼ editorial changes made to clarify clauses and/or improve readability (unless specifically stated)
- ▼ bold and italicised defined terms in the clauses, except when the defined terms are part of a heading
- ▼ references to 'Customer Contract' have been simplified to 'contract'
- ▼ use of defined terms where appropriate, and
- ▼ consistent use the term 'backflow prevention containment device'.

Table C1 Summary of proposed changes to the Customer Contract

Summary of substantial proposed changes

Foreword

Clause amended to clarify that the Customer Contract is part of the licence.

2 What is this contract and who is covered by it?

2.1 What is this contract?

Clause added to note that customers do not need to sign the Customer Contract for it to be valid and binding.

2.2 Who is covered by this contract?

Clause separated into sub-clauses to clarify the customer types included in the Customer Contract. Dot point under sub-clause 2.2.2 amended to allow for private residential tenants to be classified as a customer for the purposes of receiving customer protection provisions in the Customer Contract. Dot point amended under sub-clause 2.2.3 to allow for commercial tenants to be classified as a customer for the purposes of receiving limited customer protection provisions in the Customer Contract.

2.3 Other agreements with us

Clause amended to include additional examples, such as an additional services agreement or utility services agreements.

2.4 When does this contract commence?

Date amended to change the date of commencement of the Customer Contract to 1 July 2019.

3 What services does Sydney Water provide?

3.1.1 Supply of water

Clause amended to specify that events outside of Sydney Water's reasonable control include a disaster event. We have added a new definition of disaster event.

3.1.5 Health or special needs

Clause amended to place the obligation on the customer instead of the health provider for notifying Sydney Water that the water supply is to operate a life support machine. In practice, it is the health provider who arranges this with Sydney Water.

3.2.1 Supply of wastewater services

Clause amended to specify that events outside of Sydney Water's reasonable control include a disaster event. We have added a new definition of disaster event.

3.2.3 Trade wastewater

Clause added to allow Sydney Water to refuse trade waste into its system under certain circumstances.

3.4.4 Water restrictions

Clause amended to be consistent with the Regulation, which provides that Sydney Water can restrict supply to a person who fails to comply with a notice issued by the Minister.

Clause amended to update the means of communications. The Public Interest Advocacy Centre (PIAC) recommends that Sydney Water be required to continue including information regarding water restrictions in a major newspaper. We consider the Customer Contract should be relevant and up-date where possible and do not consider publishing in a newspaper as a sufficient means of capturing a broad base of Sydney Water's customers. We have included that Sydney Water should publish this information "in a manner that is likely to bring the water supply conditions to the attention of the public in the **area of operations**".

4 What you pay

4.4.2 What information is on your bill

PIAC recommended that information on payment assistance and rebates be included on the bill itself and more than once per year. This information is already required to be published on the bill under clause 4.4.2. Further, clause 5.2 of the licence requires Sydney Water to provide a pamphlet on account relief and provide this to customers at least annually.

Dot point added to include obligation to provide customers with information regarding their rights to rebates or redress, in response to PIAC's recommendation.

4.4.3 How bills are sent and 4.4.4 How to make a payment

Proposed clause removed as under the current price determination, there is no scope for Sydney Water to offer a discount to customer who receive their bill electronically or pay using a specific payment option.

4.9 How prices are determined

Clause amended to provide clarity.

4.11.3 Costs for installing and connecting services

Clause amended to clarify that the customer is responsible for costs associated with installing and connecting services.

4.11.4 Charges for other services

Clause amended to provide consistency with the amended clause 2.3.

5 What can I do if I am unable to pay my bill?

5.1 Payment difficulties and assistance options

Clause amended to clarify that financial hardship provisions apply to private residential tenants that pay water usage charges or are paying an unpaid amount owed by the landlord to avoid restriction or disconnection.

6 Restriction or disconnection of water supply and wastewater services

6.1 Restriction or disconnection

No change to the clause. We reject Sydney Water's proposal to remove the sentence from the clause that 'Information on these policies will be sent to you annually with your quarterly or other bills.' PIAC states that Sydney Water's proposed changes to this clause requires vulnerable customers to proactively seek out the information themselves. PIAC states that people often do not know where to get help and it is preferable that people are aware of what the consequences of not paying are and what support there is to avoid this.

6.3 Conditions for restriction or disconnection of supply of water for non-payment by customers

Timeframe amended to allow customers 10 business days instead of seven days to pay a bill before Sydney Water may restrict or disconnect the supply of water to the customer's property. This change has been made to ensure that customers are allowed sufficient time to pay their bill after receiving a restriction or disconnection notice.

Clause amended to refer to the current relevant policies.

6.4 Restriction or disconnection for other reasons

Dot point added to include that Sydney Water may restrict or disconnect customers if the customer fails to remediate or remove un-approved works consistent with clause 8.10 (building work).

Other editorial amendments for clarifications, and use of defined terms where appropriate.

6.8 Disconnection by a customer

Dot point added to include that the customer must pay any applicable charges prior to disconnecting from Sydney Water's services.

7 Redress

7.2 Rebates

Sydney Water have proposed new rebate values based on their findings from Phases 1 and 2 of their customer engagement forums. Changes to these rebate values include:

- Reduce the rebate for planned interruptions of water supply service for drinking water from \$35 to \$20, which is half the rebate for an unplanned water interruptions.
- Increase rebate for an unplanned interruption of water supply service for drinking water from \$35 to \$40 in line with CPI.
- Increase the rebate for wastewater overflows from \$60 to \$75.
- Rebates for a single water pressure failure are replaced with a rebate for three or more water pressure failure events with the rebate being paid on the third event.

Other amendments to rebates include:

- Rebates for low water pressure changed from a continuous period of 15 minutes to a continuous period of one hour. This change reflects our recommended change in the water pressure standard of which uses a measure of below 15 metres head of pressure for 1 hour. We recommend accepting Sydney Water's proposal for \$40 per event per quarter. This ensures that those customers affected by chronic low pressure continue to be compensated at the same level as under the existing Customer Contract for the inconvenience. Note the 2018-19 water service charge for residential customers is \$20.19 a quarter.
- Amendments including, the use of defined terms and clarifying that where rebates are paid on a 12 month period, this will be a rolling 12 month period.
- 'Wastewater service' removed from planned interruption and unplanned interruption clauses as this is dealt with under the dot point 'Wastewater overflow'.
- Confirm that rebates for recurring events operate in addition to rebates already received under clause 7.2.

7.3 Rebates for recurring unplanned water interruptions

Clause amended to use defined terms where appropriate and include a rolling 12 month period.

7.4 Rebates for recurring wastewater overflows

Clause title simplified.

Rebate structure amended from two or more events to three or more events.

Increase of rebates on a sliding scale:

- ▼ For two events a rebate of \$150 is paid (existing clause provide the whole annual wastewater service charge, less any concessions)
- ▼ For three or more events a rebate of the annual wastewater service charge less any concessions available after the third event (existing clause does not provide for a third event).

7.5 Exception for disaster events

New clause added to confirm that rebates do not apply to disaster events as defined.

7.7 Claim for damages

Clause amended to remove inconsistency with s41 of the Act. Sentence replaced to clarify that a customer can consider, if they have insurance, making a claim to their insurance company and does not have to seek to make an initial claim with their insurance company before seeking compensation from Sydney Water.

7.8 Guarantees and assurances

Clause title changed to improve clarity.

8 Responsibilities for maintenance

8.1 Water pipes

New definition to include the defined term for 'property boundary' to distinguish the reference to 'property' and 'property boundary'.

Dot point amended to include that 'fire services (including combined services)' is excluded from the free service offered under this clause.

Clause amended to clarify the customers' and Sydney Water's responsibilities for annual testing of backflow prevention containment devices.

Clause added to address where a customer fails to carry out their duties for testing of their backflow prevention containment device, Sydney Water may arrange for the testing and charge the customer accordingly.

Clause added to refer customers to Sydney Water's 'Responsibilities of connected customers' policy' for a summary of customer's maintenance responsibilities.

We reject Sydney Water's proposal to refer customers to its 'Responsibilities of connected customers' policy available on its website or by request. This is because the key maintenance responsibilities in this policy are already included in the Customer Contract. Further we consider it problematic to require customers to enter into conditions with Sydney Water outside of the Customer Contract.

Other editorial amendments to clarify the clause.

8.2 Wastewater pipes

Clause amended to clarify that customers are also responsible for maintaining their privately owned pressure sewerage equipment.

We reject Sydney Water's proposal to refer customers to its 'Responsibilities of connected customers' policy available on its website or by request. This is because the key maintenance responsibilities in this policy are already included in the Customer Contract. Further we consider it problematic to require customers to enter into conditions with Sydney Water outside of the Customer Contract.

8.3 Drawings

Clause added to include a new clause at 8.3, 'Drawings'. This clause introduces the diagrams at 15.3, which show the maintenance responsibilities for connections to Sydney Water's water system and wastewater system.

8.4 Pressure sewerage equipment

Existing Customer Contract clause 3.2.4 Pressure wastewater system connection has been moved to this clause.

Clarified that customers are required to enter into a separate agreements for their pressure sewerage equipment under this clause.

Clause amended to reference the new diagrams in clause 15.3 to clarify customer's maintenance responsibilities.

Other editorial amendments to clarify the clause.

Clause amended to remove reference to 1 July 2015, and replace with ownership of pressure sewerage equipment.

We reject Sydney Water's proposal to:

- ▼ Require customers to enter into a separate agreement regardless of whether they own or Sydney Water owns the pressure sewerage equipment. This is because the customer would be in breach of the Customer Contract if they did not enter into a separate agreement (even if Sydney Water required unreasonable terms and conditions).
 - ▼ Refer customers to its 'Responsibilities of connected customers' policy available on its website or by request. This is because the key maintenance responsibilities in this policy are already included in the Customer Contract. Further we consider it problematic to require customers to enter into conditions with Sydney Water outside of the Customer Contract. Schedule 1 added to include operation and maintenance obligations for pressure sewerage equipment.
-

8.8 Defective work

Clause amended to correct the use of defined terms.

Clause added to improve clarity regarding what is considered a defect with a customers' wastewater system and when Sydney Water may restrict or disconnect a water supply or wastewater connection.

8.10 Building work

Clause amended to include 'remediate' as not all unapproved works can be removed such as, excavation.

8.13 Removal of trees

Clause amended to include that Sydney Water will notify a customer in writing to remove a tree within a reasonable period.

Clause amended to clarify the particular circumstances where Sydney Water may recover the costs of removing a tree under section 46(6) of the Act.

9 Entry onto a customer's property

9.1 Access to Sydney Water's systems

Dot point added to include that the customer must ensure Sydney Water has safe access to the customer's property to identify if the customer's water system, wastewater system or stormwater pipes comprise defective private works.

10 Water meter reading, installation, testing and maintenance

10.1 Installing and maintaining a meter

Clause added to include that a backflow prevention containment device must comply with the Plumbing Code of Australia or any other regulations or standards that may apply.

Clause added to include that if a customer's meter is intentionally damaged by the customer or a person acting on behalf of the customer, Sydney Water will charge the customer for the cost of replacing the damaged meter.

Clause amended to clarify the use of defined terms.

10.2 Measuring water supplied

Clause amended to include that Sydney Water may charge the customer an unmetered service where it makes three attempts to contact the customer, with each attempt being one week apart over a 28 day period.

10.4 Access to the water meter

Part sentence removed 'and may also recover from you the cost of the attempted meter reading' because this is duplicated in the dots points within the clause.

Clause amended to increase the number of occasions of a customer not providing Sydney Water with safe access for reading or maintenance of the meter from two to three occasions before Sydney Water would take action. This is consistent with the 'inaccessible meter' charge in Sydney Water's price determination.

11 Who can I speak to if I have any questions or want to make enquiries?

11.4 Leaks and faults assistance

No change to the clause. We reject Sydney Water's proposal to remove that its leaks and faults number is listed on the bill, in the telephone directory and on its website. This is in response to the PIAC's recommendation. PIAC states that these places seem like reasonable places to have the leaks and faults number listed.

12 If I am unhappy with the service provided by Sydney Water what can I do?

12.4.1 The Energy and Water Ombudsman, New South Wales

Clause amended for minor editorial amendments.

13 Consultation, information and privacy

13.3 Privacy

Clause amended to include details on how Sydney Water will protect customers' privacy is provided on its website.

14 When does this contract with Sydney Water terminate?

14.2 Variation of this contract

Retained the requirement to publish in newspaper as the Act requires that variations in the Customer Contract be published in a daily newspaper circulating in the area of operations. We reject Sydney Water's proposed deletion of the use of a daily newspaper circulating in the area of operations to inform customers of variations to the Customer Contract.

Clause amended to include publishing the variations on Sydney Water's website.

Clause amended to include that variations of the Customer Contract will be in accordance with the Act.

15 Definitions and interpretation

15.1 Definitions

Act

Amendments to refer only to the *Sydney Water Act 1994* (NSW).

Area of operations

Amended to improve clarity.

Combined service [new definition]

New definition included for a single water connection to Sydney Water's water supply system used for both firefighting and domestic purposes. Combined services is excluded from a free service and repair under clause 8.1.

Commercial tenant [new definition]

New definition included for commercial tenant, which is referred to in cl 2.2 as a customer covered by certain clauses.

Complaint

Amended to include that a complaint can also be made about Sydney Water relating to its actions, products, services or staff and where a response or resolution is legally required.

Customer Council

Retained existing definition and rejected Sydney Water's proposed definition. The existing definition is accurate and allows Sydney Water flexibility in determining what the Customer Council will look like after the review due to conclude 30 June 2020.

Dirty Water [new definition]

New definition included for dirty water, which is defined in relation to rebates.

Disaster event [new definition]

New definition included to exclude Sydney Water from having to pay rebates in extreme weather events that significantly affects its wastewater and drinking water systems.

Drinking Water

Amended to simplify the definition.

EWON

Amended to clarify the role of EWON.

Extended Private Service [new definition]

New definition included, based on the description of this service used by Sydney Water and available on its website.

Fire service

Included reference to the defined term 'Combined services' to clarify the definition.

Low water pressure [new definition]

New definition included for low water pressure, which is defined in the clauses on rebates. Non-residential customer

Amended to include private residential tenants or commercial tenant.

Planned interruption

Amended to clarify the definition including, when a planned interruption commences and concludes.

Pressure sewerage equipment

Replaced the term 'Pressure wastewater system' with 'Pressure sewerage equipment'. Amendments to clarify the definition.

Property boundary [new definition]

New definition included to define the circumstances where Sydney Water will perform a free repair of a customer's water system.

Recycled water

Amended to align the definition with the definition provided in the licence.

Trade wastewater

Amended definition to improve clarity and readability.

Unplanned interruption

Amended to clarify the definition including, when an unplanned interruption commences and concludes.

Utility Services

New definition included to clarify services of water supply, wastewater and stormwater services.

Wastewater

Amended to improve clarity.

Wastewater overflow

Replaced the use of 'wastewater' with 'sewage' to improve clarity.

Wastewater system

Included different types of wastewater systems to improve clarity.

15.2 Interpretations

Included that any name or role changes of any organisations referred to in the Customer Contract will continue to have the same meaning as is included in the Customer Contract.

Schedule 1

New Schedule added at Schedule 1 'Operating and maintenance obligations for pressure sewerage equipment'. Schedule 1 includes details of customers operational and maintenance obligations for their pressure sewerage equipment.

16 Figures

Included diagrams to depict the delineation of maintenance responsibilities between Sydney Water and the customer.

Note: Changes described are in comparison to the existing Customer Contract at Schedule 4 in the *Sydney Water Corporation Operating Licence 2015-2020*. Clause and heading references are to the proposed Customer Contract published by IPART on 11 December 2018.