

Independent Pricing and Regulatory Tribunal
New South Wales

Review of water utility performance indicators

Report
Water

June 2018

© Independent Pricing and Regulatory Tribunal (2018)

With the exception of any:

- (a) coat of arms, logo, trade mark or other branding;
- (b) third party intellectual property; and
- (c) personal information such as photos of people,

this publication is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia Licence.



The licence terms are available at the Creative Commons website:
<https://creativecommons.org/licenses/by-nc-nd/3.0/au/legalcode>

IPART requires that it be attributed as creator of the licensed material in the following manner: © Independent Pricing and Regulatory Tribunal (2018).

The use of any material from this publication in a way not permitted by the above licence or otherwise allowed under the *Copyright Act 1968* (Cth) may be an infringement of copyright. Where you wish to use the material in a way that is not permitted, you must lodge a request for further authorisation with IPART.

Disclaimer

IPART does not guarantee or warrant, and accepts no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained in this publication.

Information in this publication is provided as general information only and is not intended as a substitute for advice from a qualified professional. IPART recommends that users exercise care and use their own skill and judgment in using information from this publication and that users carefully evaluate the accuracy, currency, completeness and relevance of such information. Users should take steps to independently verify the information in this publication and, where appropriate, seek professional advice.

Nothing in this publication should be taken to indicate IPART's or the NSW Government's commitment to a particular course of action.

ISBN 978-1-76049-231-1

The Independent Pricing and Regulatory Tribunal (IPART)

IPART provides independent regulatory decisions and advice to protect the ongoing interests of the consumers, taxpayers and citizens of NSW. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website: <https://www.ipart.nsw.gov.au/Home>.

Tribunal Members

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chair

Mr Ed Willett

Ms Deborah Cope

Enquiries regarding this document should be directed to a staff member:

Erin Cini (02) 9113 7778

Javier Canon (02) 9113 7761

Contents

1	Executive Summary	1
1.1	Overview of our performance indicators	1
1.2	Performance indicators - water quality and quantity	8
1.3	Performance indicators - assets	9
1.4	Performance indicators - environment	9
1.5	Performance indicators - customers	9
1.6	Consultation during our review	10
1.7	Structure of our report	10
1.8	List of decisions	11
2	Context	15
2.1	How do we monitor performance?	15
2.2	What performance areas do we monitor?	16
2.3	What is a performance indicator?	16
2.4	PWU licensing and performance indicators	17
2.5	WIC Act licensing and performance indicators	18
2.6	Commonwealth requirements for performance indicators	19
3	Approach to review	21
3.1	Who does this review affect?	21
3.2	How did we approach this review?	21
3.3	What did we exclude from this review?	23
4	Approach to performance indicators	24
4.1	How we will collect performance indicator information	24
4.2	How we will publish performance indicators	24
4.3	When we will collect performance indicators	24
4.4	A single set of performance indicators	25
4.5	Utilities will continue to collect their own data	26
4.6	We do not intend to collect lead indicators	26
4.7	We may investigate incentivising performance in the future	27
4.8	We will continue to collect data for our administrative purposes	28
5	Performance – Water quality and quantity	30
5.1	Water quality	30
5.2	Water quantity	32
6	Performance – Assets	37
6.1	Service interruptions	37
6.2	Water pressure	44
6.3	Wastewater overflows	47
7	Performance – Environment	51
7.1	Environment	51
8	Performance – Customers	63

8.1	Customer service	63
8.2	Customer satisfaction	65
A	IPART performance indicators – definitions	69
B	IPART licence data – definitions	73

1 Executive Summary

We collect performance indicators for water utilities¹ and use them in addition to our compliance monitoring framework, to monitor the performance of the water utilities we regulate. In addition to the IPART performance indicators², water utilities may also report on the National Water Initiative (NWI) indicators³.

Performance indicators can be a useful tool to monitor or assess a utility's performance and analyse performance trends. We publish data collected from the IPART performance indicators on our website annually.

We undertook this review of IPART performance indicators to ensure that the information we collect is useful and that we are not imposing unnecessary regulatory costs. This means that the benefits derived from requiring water utilities to report on performance indicators should outweigh the costs of collection and reporting.

This report outlines the performance indicators for water utilities that we will collect for the 2017-18 reporting year onwards and discusses the supporting analysis for our decisions.

1.1 Overview of our performance indicators

We are streamlining our performance indicators and reducing regulatory burden

We hold water utilities accountable using both compliance monitoring⁴ (for example, annual reporting and auditing against licence conditions) and the performance indicators that we are considering as part of this review. We have identified performance indicators that we are able to reduce or remove because we are able to adequately monitor performance through our compliance activities. Therefore, we have reduced the number of performance indicators to 27 indicators (Table 1.1), representing a reduction of more than 75 percent from our existing indicator list.⁵ Our streamlined IPART performance indicators will remove unnecessary red tape without compromising the quality of our regulatory oversight.

We have removed the requirement to report on performance indicators for *Water Industry Competition Act 2006* (WIC Act) retail suppliers, this is because our compliance monitoring approach is adequate to monitor their performance.

¹ We administer the operating licences for Hunter Water Corporation, Sydney Water Corporation, WaterNSW, and the network operator and retail supplier licences for *Water Industry Competition Act 2006* licensees.

² We refer to the water utility performance indicators we collect as the 'IPART performance indicators'.

³ NWI indicator information is collected from Australian water utilities annually by the Bureau of Meteorology. We have a role in coordinating the data from the water utilities we regulate.

⁴ Our approach to compliance is detailed in our Compliance and Enforcement Policy, December 2017 Available: <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/licensing-policy-cross-industry-review-of-ipart-compliance-and-enforcement-policy-2017/ipart-compliance-and-enforcement-policy-december-2017.pdf>

⁵ Across water utilities, our five existing IPART performance indicator sets include 121 unique performance indicators.

We have reduced the number of performance indicators and reporting requirements for Hunter Water Corporation (Hunter Water), Sydney Water Corporation (Sydney Water), and WIC Act network operators. We have increased the number of performance indicators for WaterNSW to allow us to collect information from WaterNSW that reflects the performance standards in its operating licence. WaterNSW proposed this change in response to our Issues Paper.⁶

We assess the changes to the performance indicators by applying criteria which ensures our performance indicators:

- ▼ have a regulatory purpose
- ▼ align with the desired regulatory performance outcome
- ▼ have benefits which outweigh the costs of collecting information
- ▼ are not collected through other means, and
- ▼ are consistent with SMART⁷ criteria.⁸

We will implement a single set of performance indicators for the water utilities we regulate, however due to different legislative frameworks and services provided, not all utilities are required to report on each IPART performance indicator (see Table 1.1). The list and definitions for our performance indicators are in Appendix A.

We will continue to monitor performance using a combination of compliance monitoring and performance indicators

We monitor water utility performance across the following performance areas:

- ▼ water quality and quantity
- ▼ assets
- ▼ environment, and
- ▼ customers.

We will continue to use both compliance monitoring and performance indicators to monitor performance. Where compliance monitoring is sufficient to monitor performance we will not collect performance indicators.

We are creating consistency in timing and format of collection and reporting

We have considered the timing and format of collection and reporting on water utility performance indicators. We will require all water utilities to report in a consistent manner, including:

- ▼ all water utilities are required to report on performance indicators (excluding environment performance indicators) on 1 September each year

⁶ WaterNSW, Submission to the IPART review of water utility performance indicators, March 2018, p8.

⁷ Specific, Measurable, Achievable, Relevant and Time-bound.

⁸ See Figure 3.3.





























































-
- ▼ Sydney Water and WaterNSW are required to report on environment performance indicators on 1 October each year
 - ▼ all water utilities are required to submit information in a database or spreadsheet format, and
 - ▼ IPART will publish the performance indicator information we collect from water utilities annually.












































































We will collect licence data to assist in our administrative functions

We will collect licence data for the calculation of WIC Act retail supplier licence fees and to understand the number of customers served by retail water utilities (ie, Hunter Water, Sydney Water and WIC Act retail suppliers). The licence data, will allow us to understand the impact of our role, to inform our risk based-compliance activities, and may also provide context and information to stakeholders. In some cases this licence data replaces existing performance indicators.

The list and definitions for our licence data are in Appendix B.

Table 1.1 IPART performance monitoring approach

Performance area	Indicator number	Obligation or indicator	Water utility ^a				
			Hunter Water	Sydney Water	Water NSW	WICA NOL	WICA RSL
		Total number of IPART indicators	5	19	10	7	0
Water quality		Maintain and implement a Drinking Water Quality Management System consistent with the Australian Drinking Water Guidelines					
		Maintain and implement a Recycled Water Quality Management System consistent with the Australian Guidelines for Water Recycling					
Water quantity		Obligations related to water conservation, including water recycling					
	W1	Percent of Customers who place a Non-complying Water Order whom Water NSW contact within one working day to rectify that order					
	W2	Percent of Water Orders which are Delivered within one day of the scheduled day of Delivery					
	W3	Percent of complying Temporary Trades within the State in the financial year which are processed within five working days of Water NSW's receipt of a correct application and fee					
	W4	Percent of Interstate Temporary Trades (except to South Australia) in the financial year which are processed within 10 working days of Water NSW's receipt of a correct application and fee					
	W5	Percent of Interstate Temporary Trades to South Australia in the financial year which are processed within 20 working days of Water NSW's receipt of a correct application and fee					
Assets		Maintain and implement an Asset Management System consistent with the requirements of its licence					
		Maintain and implement and Infrastructure Operating Plan					
	A1	Number of properties that experience an Unplanned Water Interruption that lasts for more than five continuous hours					
	A2	Number of properties that experience three or more Unplanned Water Interruptions that each lasts for more than one hour					

Performance area	Indicator number	Obligation or indicator	Water utility ^a				
			Hunter Water	Sydney Water	Water NSW	WICA NOL	WICA RSL
	A3	Total number of unplanned interruptions – water supply					
	A4	Average duration of unplanned water interruptions – water supply					
	A5	Percent of priority 6 breaks/leaks in drinking water mains that the water utility responded to within 3 hours					
	A6	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 6 hours					
	A7	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 24 hours					
	A8	Percent of priority 4 breaks/leaks in drinking water mains that the water utility responded to within 5 days					
	A9	Percent of Water Orders rescheduled, which are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay					
	A10	Number of properties that experience a water pressure failure					
	A11	Number of properties (other than public properties) that experience an uncontrolled wastewater overflow in dry weather					
	A12	Number of properties (other than public properties) that experience three or more uncontrolled wastewater overflows in dry weather					
Environment		Maintain and implement an Environmental Management System consistent with the requirements of the licence					
		Comply with environment conditions in its legislation and licence					
		Comply with requirements of Environment Protection Licences where relevant					
		Comply with requirements of NSW and Commonwealth environment legislation					
	E1	Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills					

Performance area	Indicator number	Obligation or indicator	Water utility ^a				
			Hunter Water	Sydney Water	Water NSW	WICA NOL	WICA RSL
	E2	Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption					
	E3	Total number of controlled wastewater overflows that occur in dry weather that discharged to the environment, per km of sewer main					
	E4	Total number of uncontrolled wastewater overflows that occur in dry weather that discharged to the environment, per km of sewer main					
	E5	Estimated total mass of biosolids produced by the water utility					
	E6	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated					
	E7	Estimated total mass of solid waste generated by the water utility					
	E8	Total area of clearing of native vegetation					
	E9	Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility					
	E10	Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility					
Customers		Customer contracts and service obligations					
		Maintain policies and procedures for assisting customers who are experiencing financial hardship					
		Maintain procedure for receiving, responding to, and resolving complaints consistent with Australian standards.					
		Maintain and implement procedures for disconnecting or restricting water supply in the event of non-payment.					
		Maintain membership of ombudsman scheme					

a Key to table:



IPART indicator not applicable to the utility.

Performance monitored by:

IPART



Performance of the water utility primarily monitored through IPART compliance monitoring.



IPART indicator applicable to the utility.

Note: The environmental indicators applicable to Sydney Water and WaterNSW are due to requirements of the *Sydney Water Act 1994* and *Water NSW Act 2014* respectively. The environment performance of water utilities is monitored under NSW and Commonwealth legislation.



IPART indicator applicable to the utility and is reported to the Bureau of Meteorology as a National Water Initiative indicator under the National Urban Water Utility Performance Reporting Framework.

Other NSW and/or Commonwealth agencies



Performance of the water utility primarily monitoring by another regulator. The environment performance of water utilities is monitored under NSW and Commonwealth legislation.



IPART indicator not applicable to the utility. The environment performance of water utilities is monitored under NSW and Commonwealth legislation.

1.2 Performance indicators - water quality and quantity

Water quality

We do not require water utilities to report on water quality performance indicators. Instead we will monitor the water quality performance of water utilities through our compliance monitoring which includes self-reporting, public disclosure of information, and audits.

There appears to be limited need to use performance indicators to monitor the performance of water utilities on water quality because:

- ▼ all water utilities are required to have management systems or plans in place to meet the Australian Drinking Water Guidelines (ADWG) and Australian Guidelines for Water Recycling (AGWR)
- ▼ all water utilities are required to report on any non-compliance
- ▼ in addition to reporting to IPART, all water utilities have some obligations to report to NSW Health, customers, or the Minister for Public Health on water quality outputs and outcomes, and
- ▼ all water utilities' performance in meeting water quality licence obligations is generally good.

Stakeholders, including NSW Health, support our approach.⁹

Water quantity

We will primarily monitor the water quantity performance of water utilities using our compliance monitoring framework.

However, we require WaterNSW to report on five water quantity performance indicators which align with its performance standards for water released for extraction and use under a customers access licence.

There appears to be limited need to use performance indicators to monitor the performance of water utilities other than WaterNSW on water quantity since:

- ▼ we monitor the compliance of all water utilities with their water quantity and water conservation obligations
- ▼ water utilities other than WaterNSW do not have a performance standard related to water quantity, and
- ▼ water utilities can provide detailed water usage and demand forecast information in other ways.

⁹ IPART Transcript, Stakeholder Roundtable, 20 March 2018, p5; Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p10; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p7; Department of Planning and Environment, Submission on water utility performance indicators review, 9 March 2018, p2.

1.3 Performance indicators - assets

We require water utilities to report on asset performance indicators that align with existing performance standards, including:

- ▼ service interruptions
- ▼ water pressure, and
- ▼ wastewater overflows.

These performance standards relate to management of assets, and the level of service provided to customers. Water utilities and other stakeholders broadly support this approach.

Eight performance indicators relate to service interruptions (including four for main breaks and leaks response times), one relates to water pressure and two relate to wastewater overflows in dry weather. Our asset performance indicators apply to water utilities with a network or bulk supply function, ie, Hunter Water, Sydney Water, WaterNSW and WIC Act network operators, with the exception of the four related to main breaks and leaks response times. Those indicators apply only to Sydney Water.¹⁰ As WIC Act retail suppliers do not construct, maintain or operate assets, we will not collect information on the performance of their assets.

As we base our asset performance indicators on existing performance standards, our asset performance indicators may change in the future if performance standards change. In our current review of the Sydney Water operating licence (which commenced in June 2018¹¹) we are reviewing Sydney Water's performance standards, including considering opportunities for customers to be engaged in decisions about performance standards.

1.4 Performance indicators - environment

The legislative frameworks of Sydney Water and WaterNSW require environment indicators to be compiled. We will require Sydney Water and WaterNSW to report on environment performance indicators. Where possible we have made indicators consistent between Sydney Water and WaterNSW and have removed indicators where information is collected through other means.

Hunter Water, WIC Act network operators and WIC Act retail suppliers do not have any requirements to compile environment indicators. We will not require water utilities to report on environment performance indicators where there are no legislative requirements to compile environment indicators. We will continue to monitor the compliance of all water utilities with the environment obligations in their licences.

1.5 Performance indicators - customers

We do not require water utilities to report on performance indicators for customer service, and instead will monitor the customer performance of water utilities using our compliance monitoring framework. Stakeholders support this approach.

¹⁰ This was a recommendation of Sydney Water's most recent operating licence review.

¹¹ Our Issues Paper – Review of Sydney Water operating licence was released on 25 June 2018 and is available on our website, public submissions close on 20 August 2018.

We intend to further investigate the introduction of customer satisfaction indicators during 2018-19.

1.6 Consultation during our review

In undertaking this review, we conducted both targeted and public consultation. We:

- ▼ Released an Issues Paper on 14 February 2018 outlining our proposed approach to the review and invited comment.
- ▼ Held a Stakeholder Roundtable in March 2018 to provide the opportunity to discuss our preliminary view and the views of key stakeholders.
- ▼ Released a Draft Report on 27 April 2018 after considering all submissions to our Issues Paper.

We would like to thank everyone who participated in this review, particularly stakeholders who took the time to attend our Stakeholder Roundtable and prepare submissions.

1.7 Structure of our report

The rest of this report explains our findings, decisions and performance indicators in more detail:

- ▼ **Chapter 2** outlines key contextual information relevant to our review of water utility performance indicators.
- ▼ **Chapter 3** explains the approach we have used to develop our performance indicators, including the objectives and the issues we considered.
- ▼ **Chapter 4** explains our approach to collecting and publishing performance indicators.
- ▼ **Chapter 5** identifies and discusses outcomes and performance indicators for water quality and quantity.
- ▼ **Chapter 6** identifies and discusses outcomes and performance indicators for assets.
- ▼ **Chapter 7** identifies and discusses outcomes and performance indicators for environment.
- ▼ **Chapter 8** identifies and discusses outcomes and performance indicators for customers.

1.8 List of decisions

Reporting dates

- | | | |
|---|--|----|
| 1 | Water utilities must report on IPART performance indicators (excluding environment indicators) to IPART by 1 September of each year. | 25 |
| 2 | Water utilities must report on IPART environment performance indicators to IPART by 1 October of each year. | 25 |
| 3 | Public water utilities must report on NWI indicators (excluding environment indicators) to IPART by 1 September of each year. | 25 |
| 4 | Public water utilities must report on NWI environment indicators to IPART by 1 October of each year. | 25 |

Licence data

- | | | |
|---|---|----|
| 5 | WIC Act retail suppliers must provide the following licence data to IPART by 1 September of each year: | 28 |
| | – L1 Total volume of water supplied (ML) | 28 |
| | – L2 Total volume of non-potable water supplied (ML) | 28 |
| | – L3 Total volume of sewage collected (ML) | 28 |
| | – L4 Connected residential properties – water supply (000s) | 29 |
| | – L5 Connected non-residential properties – water supply (000s) | 29 |
| | – L6 Connected residential properties – wastewater (000s) | 29 |
| | – L7 Connected non-residential properties – wastewater (000s) | 29 |
| 6 | Hunter Water, Sydney Water and WIC Act retail suppliers must provide the following licence data to IPART by 1 September of each year: | 29 |
| | – L8 Connected residential properties – recycled water supply (000s) | 29 |
| | – L9 Connected non-residential properties – recycled water supply (000s) | 29 |

Water quality

- | | | |
|---|--|----|
| 7 | Given that IPART assesses water quality outcomes through regular continuous monitoring and reporting, IPART does not require water utilities to report on performance indicators for water quality. | 30 |
| 8 | Given that WaterNSW reports on catchment health indicators as part of the catchment audit undertaken by the NSW Government, IPART does not require WaterNSW to report catchment health indicators annually to IPART. | 32 |

Water quantity

- | | | |
|---|--|----|
| 9 | WaterNSW must report on the following indicators for water quantity: | 33 |
|---|--|----|

– W1 Percent of Customers who place a Non-complying Water Order whom Water NSW contact within one working day to rectify that order	33
– W2 Percent of Water Orders which are Delivered within one day of the scheduled day of Delivery	33
– W3 Percent of complying Temporary Trades within the State in the financial year which are processed within five working days of Water NSW's receipt of a correct application and fee	33
– W4 Percent of Interstate Temporary Trades (except to South Australia) in the financial year which are processed within 10 working days of Water NSW's receipt of a correct application and fee	33
– W5 Percent of Interstate Temporary Trades to South Australia in the financial year which are processed within 20 working days of Water NSW's receipt of a correct application and fee	33
 Asset – service interruptions	
10 Hunter Water, Sydney Water and WIC Act network operators must report on the following IPART performance indicators for service interruptions:	37
– A1 Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours	37
– A2 Number of properties that experience three or more unplanned water interruptions that each lasts for more than one hour	37
11 WIC Act network operators must report on the following IPART performance indicators for service interruptions:	37
– A3 Total number of unplanned interruptions – water supply	37
– A4 Average duration of unplanned water interruptions – water supply	38
12 Sydney Water must report on the following IPART performance indicators for service interruptions:	38
– A5 Percent of priority 6 breaks/leaks in drinking water mains that the water utility responded to within 3 hours	38
– A6 Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 6 hours	38
– A7 Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 24 hours	38
– A8 Percent of priority 4 breaks/leaks in drinking water mains that the water utility responded to within 5 days	38
13 WaterNSW must report on the following IPART performance indicators on service interruptions:	38
– A9 Percent of Water Orders rescheduled, which are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay	38

Asset – water pressure

- 14 Hunter Water, Sydney Water and WIC Act network operators must report on the following IPART performance indicator for water pressure: 44
- A10 Number of properties that experience a water pressure failure (as defined in the water utility's licence) 44

Asset – wastewater overflows

- 15 Hunter Water, Sydney Water, and WIC Act network operators must report on the following IPART performance indicators on wastewater overflows: 48
- A11 Number of properties (other than public properties) that experience an uncontrolled wastewater overflow in dry weather 48
 - A12 Number of properties (other than public properties) that experience three or more uncontrolled wastewater overflows in dry weather 48

Environment

- 16 Given that water utilities are required to comply with the environment legislative framework and both Sydney Water and WaterNSW are required under their legislation to report on environmental indicators, IPART does not require Hunter Water and WIC Act licensees to report on performance indicators for the environment. 52
- 17 Sydney Water must report on the following IPART performance indicators for the environment: 53
- E1 Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills 53
 - E2 Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption 53
 - E3 Total number of Controlled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main 54
 - E4 Total number of Uncontrolled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main 54
 - E5 Estimated total mass of biosolids produced by the water utility 54
 - E6 Percent of solid waste Recycled or Reused expressed as a percentage of solid waste generated 54
 - E7 Estimated total mass of solid waste generated by the water utility 54
 - E8 Total area of clearing of native vegetation 54
 - E9 Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility 54
 - E10 Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility 54
- 18 For 2018 only, WaterNSW must report on the existing IPART performance indicators for the environment, applicable to the Declared Catchment Areas only: 61

– E1 Total annual energy consumed by the water utility (electricity, fuel and gas) in units provided on energy bills	61
– E2 Green electricity consumption as a % of total electricity consumption by Water NSW	61
– E3 Estimated volume and type of waste annually sent to landfill from Water NSW's activities (kg per year)	61
– E4 Waste recycled or reused expressed as a percentage of total waste generated by Water NSW's activities, by type of waste	61
19 From 2019, WaterNSW must report on the following IPART performance indicators for the environment, applicable to the Declared Catchment Areas only:	61
– E1 Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills	61
– E2 Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption	61
– E6 Percent of solid waste recycled or reused expressed as a percentage of solid waste generated	61
– E7 Estimated total mass of solid waste generated by the water utility	61

Customers

20 Given that IPART assesses customer service outcomes through regular monitoring and reporting, IPART does not require water utilities to report on performance indicators on customer service.	63
21 IPART intends to review customer satisfaction indicators for water utilities in 2018-19.	65

2 Context

This chapter outlines key contextual information relevant to our review of water utility performance indicators.

2.1 How do we monitor performance?

We monitor the performance of the water utilities we regulate against regulatory objectives and outcomes. To measure performance against the objectives and outcomes, we use compliance monitoring¹² (including self-reporting, public disclosure of information, and audits), performance indicators, or a combination of both (Figure 2.1). In some cases, our existing compliance monitoring approach is sufficient, whereas for other outcomes, we require additional information regarding performance (through the use of indicators).

The licence(s) applicable to each utility authorise a water utility to carry out its functions, and regulate how it undertakes those functions through terms and conditions designed to meet regulatory objectives. Where possible the terms and conditions of water utility licences are outcomes-based rather than having prescriptive inputs or outputs or other requirements. We continue to move towards outcomes-based regulation of water utilities.

Compliance monitoring is necessary when the obligation is complex and reporting on an indicator does not simply or reliably measure compliance with or performance against an obligation. Our compliance monitoring allows us to consider whether a utility complies or does not comply with a regulatory requirement (and therefore outcome). Where we audit, we can also consider auditor commentary to ascertain the risk of a utility failing in the near future or to build a picture of how a utility is performing over time.

Where our compliance monitoring is able to appropriately monitor performance or where a performance indicator is unable to provide a meaningful result, we will not collect performance indicator information to monitor the water utility's performance.

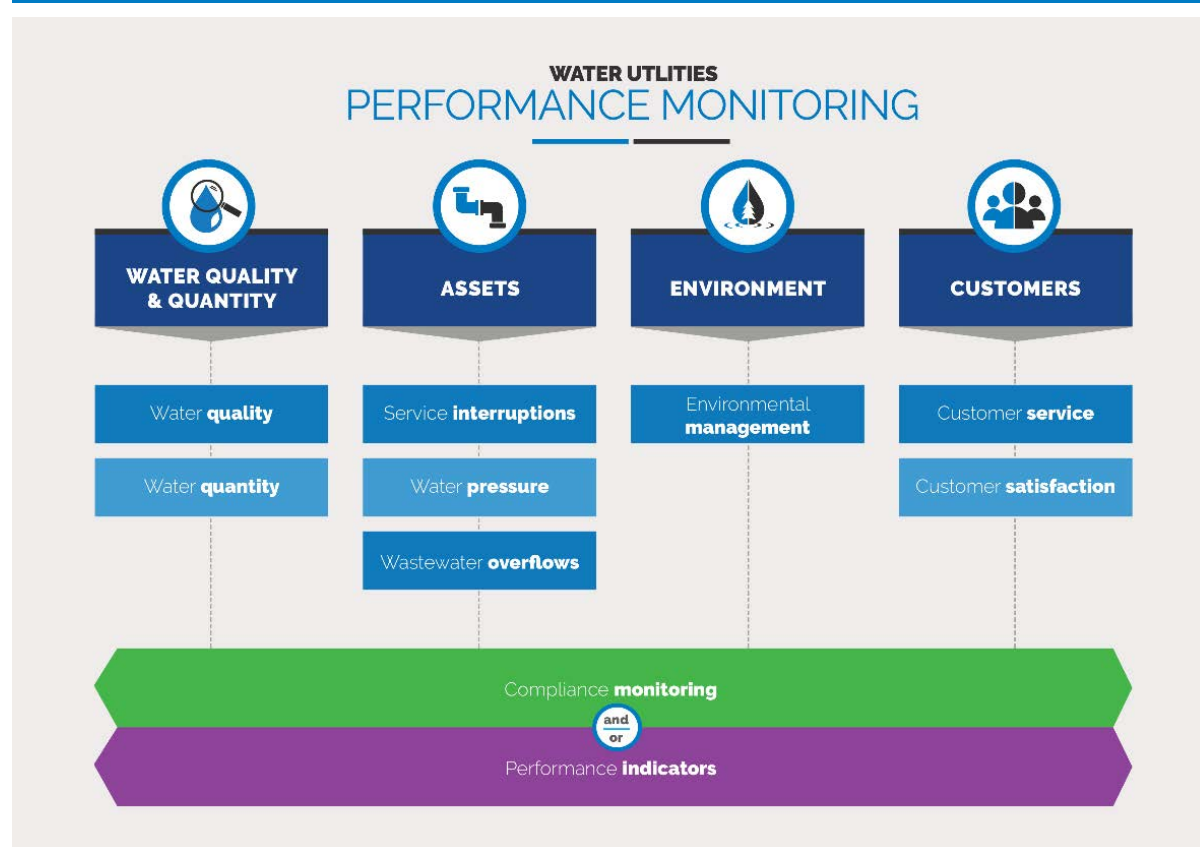
¹² Our approach to compliance is detailed in our Compliance and Enforcement Policy, December 2017 Available: <https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/licensing-policy-cross-industry-review-of-ipart-compliance-and-enforcement-policy-2017/ipart-compliance-and-enforcement-policy-december-2017.pdf>

2.2 What performance areas do we monitor?

Due to the diversity of functions, size, structure and services provided by each of the water utilities it is not possible to apply a single set of outcomes or objectives to the performance of the water utilities we regulate. However, the performance outcomes in the existing operating licences of public water utilities (PWUs) and WIC Act licensees generally fall within four key performance areas:

- ▼ water quality and quantity
- ▼ assets
- ▼ environment, and
- ▼ customers.

Figure 2.1 IPART's approach to performance monitoring



2.3 What is a performance indicator?

A performance indicator is something that can be simply and reliably used to measure change and assess performance against a goal or target.

Reporting against indicators can be useful in providing information to the public, to other regulators and to us about performance and compliance of water utilities.

While the use of performance indicators is widespread across government and private sectors, we considered the following factors to determine whether the performance indicators are appropriate and effective:

- ▼ the benefits derived from data must outweigh the costs of collection, and
- ▼ indicators should be selected and used carefully to ensure data is aligned and representative of an area of performance or outcome that is desired.

2.4 PWU licensing and performance indicators

IPART administers the operating licences for Hunter Water, Sydney Water and WaterNSW. The licences set the terms and conditions that each utility is required to meet in order to:

- ▼ ensure service quality and reliable supply
- ▼ protect customers, and
- ▼ assess the impact of the utility on the environment.

We review each licence regularly, at intervals of no longer than five years and we audit each licence annually applying our risk-based compliance framework to determine the appropriate scope of these audits. We publish a Public Water Utility Audit Guideline,¹³ and each PWU is required under its licence¹⁴ to comply with a reporting manual,¹⁵ which requires it to report annually on water utility performance.

The *Hunter Water Corporation Act 1991* (Hunter Water Act), *Sydney Water Corporation Act 1994* (Sydney Water Act), and *Water NSW Act 2014* (Water NSW Act) require that PWU licences include terms and conditions requiring the utility to meet performance standards, specified in the licence. Each Act specifies the issues which may be addressed by performance standards:

- ▼ Hunter Water: water quality, service interruptions, price levels and other matters determined by the Governor.¹⁶
- ▼ Sydney Water: water quality, service interruptions, pricing and other matters determined by the Governor.¹⁷
- ▼ WaterNSW: water delivery, water quality, service interruptions or any other matters.¹⁸

Under the Hunter Water Act there is no requirement to compile indicators on the direct impact of its activities on the environment.

Under the Sydney Water Act and the Water NSW Act, operating licences must require the utility to compile indicators on the direct impact of their activities on the environment.¹⁹ Sydney Water must use this information to prepare an annual report and include a year-to-

¹³ IPART, *Audit Guideline Public Water Utilities*, June 2018.

¹⁴ Hunter Water Operating Licence 2017-2022, cl. 6.2; Sydney Water Operating Licence 2015-2020, cl.8.2; Water NSW Operating Licence 2017-2022, cl. 7.2.

¹⁵ Hunter Water Corporation Reporting Manual 2017-2022; Sydney Water Corporation Reporting Manual 2015-2020; Water NSW Reporting Manual 2017-2022.

¹⁶ *Hunter Water Act 1991*, s 13(1)(c).

¹⁷ *Sydney Water Act 1994*, s 14(1)(c).

¹⁸ *Water NSW Act 2014*, s 12(2)(a).

¹⁹ *Sydney Water Act 1994*, s 14(1)(d); *Water NSW Act 2014*, s 12(2)(b).

year comparison on its environmental performance. Sydney Water's operating licence specifies a requirement for Sydney Water to report on the environmental performance indicators. Sydney Water publishes an annual Environmental Indicators Report, as part of its Environmental Compliance and Performance Report, on its website.

WaterNSW's environmental indicators provide information on its performance and enable reports to be prepared, but there is no statutory obligation to publish indicators or any reports. However, WaterNSW's licence and reporting manual require it to report annually to IPART on the environmental performance indicators specified by IPART.²⁰ We then publish this information annually.

Additionally, the Water NSW Act requires that every three years WaterNSW is audited against catchment health indicators for the Sydney Catchment Area. We do not undertake this audit. The former Department of Water and Energy developed the 18 catchment health indicators which were published in the Government gazette on 19 December 2008.²¹ The portfolio Minister tables the audit report in Parliament and WaterNSW must use the results to inform its catchment management programs and activities, and risk framework. Under our existing approach we require WaterNSW to report annually to us on the five catchment health indicators it collects, we have decided to remove this annual requirement (see Section 5.1 for our discussion on this decision).²²

2.5 WIC Act licensing and performance indicators

IPART is responsible for administering the licence regime under the WIC Act. We monitor and assess licensees' compliance with their licence conditions and provide an annual report to the Minister for Energy and Utilities. We identify non-compliances with licence conditions through audits, licensees' self-reporting and our analysis. Our monitoring of licensees' compliance is critical to:

- ▼ protect public health, public safety, consumers and the environment, and
- ▼ encourage competition in the market by maintaining market confidence and integrity.

The WIC Act does not specify particular performance indicators for the WIC Act licensees. However, IPART's functions under the WIC Act are to monitor, and to report to the Minister on, the extent to which licensed network operators and licensed retail suppliers comply, or fail to comply, with the conditions imposed on the licences held by them.²³ To facilitate the monitoring and reporting, there are existing conditions in the WIC Act licences that require licensees to outline their (proposed) arrangements for the maintenance, monitoring and reporting of standards of service.

The legislation also imposes reporting obligations, such as the requirement for retail supplier's licensees to provide periodic reports regarding customer complaints to the Minister and IPART.²⁴

²⁰ Water NSW Operating Licence 2017-2022, cl 2.3.1(d).

²¹ NSW Government Gazette number 158, Friday 19 December 2008.

²² Other agencies are responsible for collecting the remaining 13 catchment health indicators.

²³ WIC Act, s85.

²⁴ *Water Industry Competition (General) Regulation 2008* (WIC Regulation), Sch 2, cl 4.

2.6 Commonwealth requirements for performance indicators

The *Water Act 2007* (Cth) (Water Act) and *Water Regulations 2008* (Cth) (Water Regulations) specify water information which urban water utilities must provide to the Bureau of Meteorology (BOM). The BOM manages, interprets and reports on the information collected. A utility does not have to provide information to the BOM where the BOM already has that information from another source. Water information which utilities must provide under the Water Act includes:

- ▼ Information or data relating to:
 - the availability, distribution, quantity, quality, use, trading or cost of water, and
 - water access rights, water delivery rights or irrigation rights.
- ▼ Any metadata relating to the data above, and contextual information about land use, geological and ecological context.

The Water Regulations specify who should report, and when and how the information should be reported.

- ▼ Utilities are classified into categories A-M, with the categories reflecting the scope of the company's operations. Each category has different reporting requirements.
- ▼ Water information is classified into 11 categories (for example, Category 3 – water storage information). The Water Regulations specify the necessary information and the time at which it is required.


By referring to the Water Act and Water Regulations, utilities can comprehensively identify the information they must provide to the BOM. The BOM also maintains a tool which allows utilities to generate a list of reporting obligations.²⁵

Of the water utilities we regulate, Hunter Water, Sydney Water and WaterNSW report to the BOM on NWI indicators. The NWI indicators include water resource supply and usage, financial operations, bills and pricing, assets, water quality compliance and customer performance. Our PWU reporting manuals currently require that water utilities enter the relevant NWI indicator information into the Urban National Performance Report (Urban NPR) database. The BOM publishes the annual Urban NPR, with the agreement of all states and territories.

Water utilities that are either bulk water utilities or service at least 10,000 connected properties must report on NWI indicators.²⁶ At this time, as none of the WIC Act licensees are servicing 10,000 or more connected properties, the WIC Act licensees are not required to report on NWI indicators. When we developed the list of WIC Act licensee IPART performance indicators in 2009, we matched some of our IPART performance indicators to existing NWI indicators to create a similar data set. For WIC Act licensees the existing IPART performance indicators include 37 NWI indicators for both network operators and

²⁵ Bureau of Meteorology, *Find Your Organisation*, at <http://www.bom.gov.au/water/regulations/search.php>, accessed 1 June 2018.

²⁶ Bureau of Meteorology 2017, National performance report 2015-16: urban water utilities – Part A.



retail suppliers.²⁷ As a result of this review we no longer require WIC Act licensees to report on the majority of these indicators.²⁸

For the water utilities that are required to provide NWI indicator information to BOM we have now removed all duplication with the IPART performance indicators.

²⁷ WIC Act network operators and retail suppliers both have 37 NWI indicators included in their IPART performance indicators list, although some of these indicators are the same, it is a different set of 37 indicators for each licence type reflecting the different services provided under the two licence types.

²⁸ The exceptions are IPART performance indicators A3 and A4 which match NWI indicators IC17 and C15 respectively. See section 6.1 for more information.

3 Approach to review

This chapter explains the approach we have used to develop our performance indicators, including the objectives and issues we considered.

3.1 Who does this review affect?

This review affects the following water utilities:

- ▼ Hunter Water
- ▼ Sydney Water
- ▼ WaterNSW
- ▼ WIC Act network operators, and
- ▼ WIC Act retail suppliers.

We collect information against performance indicators from these water utilities.

We have amended the following reporting manuals to reflect changes to performance indicators as a result of this review:

- ▼ Hunter Water Reporting Manual
- ▼ Sydney Water Reporting Manual
- ▼ Water NSW Reporting Manual
- ▼ WIC Act Network Operator's Reporting Manual, and
- ▼ WIC Act Retail Supplier's Reporting Manual.

3.2 How did we approach this review?

We last reviewed our PWU²⁹ performance indicators in 2012, and we had not reviewed our *Water Industry Competition Act 2006* licensee performance indicators since we first created them in 2009. Our existing approach to date, has five different sets of IPART performance indicators, one for each of the three PWUs, one for each of the WIC Act network operators and WIC Act retail suppliers. Across these water utilities our five existing IPART performance indicator sets include 121 unique IPART performance indicators.

In undertaking this review we considered it important to identify clear outcomes, understand the justification for performance standards and any performance indicators, and to clearly define a role for IPART in relation to performance indicators. In deciding on the IPART performance indicators we have set them to align with the desired outcome set by the legislative framework and water utility licences. We have also sought to ensure that our

²⁹ We administer the operating licences of Hunter Water Corporation, Sydney Water Corporation and WaterNSW.

performance indicators provide greater benefits than costs and are not currently collected through other mechanisms. Water utilities have different legislative frameworks and licences, and where the desired outcome is different between utilities we consider the desired outcome for each water utility.

We have developed a set of assessment criteria to provide guidance when considering which performance indicators to apply. The use of assessment criteria should help to ensure that our decisions are clear, consistent and transparent. Following feedback from water utilities to our Issues Paper,³⁰ we have clearly identified the desired outcomes for each performance area in this report.

The assessment criteria for the inclusion (or exclusion) of performance indicators are set out in Figure 3.1. We are applying a first principles approach, and use these assessment criteria to assess whether we should require collection of information against a performance indicator.





Figure 3.1 Criteria for the assessment of whether a performance indicator is necessary



³⁰ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2016, p6; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, March 2018, p4.

We undertake an assessment of each performance indicator in Chapters 5 to 8. We provide a key for our assessment in Figure 3.2.

Figure 3.2 Key for the assessment of whether a performance indicator is necessary

Symbol	Response to criteria question
	Yes
	Uncertain
	No
	Assessment not undertaken

3.3 What did we exclude from this review?

This review considers only performance indicators that we collect from water utilities to monitor their performance against regulatory objectives and outcomes, it does not consider:

- ▼ changes to performance standards or other licence obligations, or
- ▼ information we collect to inform our price regulation role.³¹

³¹ The information we collect to inform our price regulation role is set out in IPART's *Guidelines for Water Agency Pricing Submissions*, April 2018.

4 Approach to performance indicators

This chapter explains our approach to collecting and publishing performance indicators.

4.1 How we will collect performance indicator information

We will collect information against performance indicators via a database or spreadsheet method. We will provide access to water utilities to enter their information into a database or access to a template spreadsheet.

4.2 How we will publish performance indicators

We will publish performance indicator information on our website in a format that is easy to access and use. We intend to be consistent with the NSW Government's Open Data Policy and provide transparent information to customers and other stakeholders. The Department of Planning and Environment (DPE) supported this approach in its submission to our Issues Paper.³²

We will continue to use the information from performance indicators as a monitoring tool and not undertake analysis of performance outcomes or incentivise changes in performance, other than by publishing the information we collect.

4.3 When we will collect performance indicators

We will collect performance data at the same time for all water utilities. The existing approach is that PWUs report against the majority of their performance indicators for the previous financial year by 1 September, and WIC Act utilities report by 31 August. Commencing in 2018, we require all water utilities to provide performance indicator data (excluding environment indicators) on 1 September of each year. This creates consistency in the reporting framework for water utilities.

Sydney Water and WaterNSW have in the past identified the 1 September requirement for reporting on environment indicators to be difficult to achieve. We maintain the requirement that Sydney Water and WaterNSW report on environment performance indicators by 1 October of each year.³³

We have also aligned the NWI indicator reporting timeline, such that public water utilities must report against all NWI indicators (excluding environment indicators) to IPART by 1 September of each year and NWI environment indicators to IPART by 1 October of each year.

³² DPE, Submission on water utility performance indicators review, 9 March 2018, p2.

³³ Only Sydney Water and WaterNSW are required to report on environment performance indicators. Sydney Water Corporation Reporting Manual 2015-2020, section 8.2.1; Water NSW Reporting Manual Operating Licence 2017-2022, Appendix A, Table A.1.

Decisions

- 1 Water utilities must report on IPART performance indicators (excluding environment indicators) to IPART by 1 September of each year.
- 2 Water utilities must report on IPART environment performance indicators to IPART by 1 October of each year.
- 3 Public water utilities must report on NWI indicators (excluding environment indicators) to IPART by 1 September of each year.
- 4 Public water utilities must report on NWI environment indicators to IPART by 1 October of each year.

4.4 A single set of performance indicators

We will implement a single set of performance indicators for the water utilities we regulate, however due to different legislative frameworks and services provided, not all utilities are required to report on each IPART performance indicator (see Table 1.1).

This means that, regardless of whether the water utility is a PWU or WIC Act licensee, the indicators that measure whether the water utility is performing in line with the preferred outcomes will be the same. This ensures that where the utilities are providing the same service to customers, they will be treated the same under the performance indicator framework, thereby creating a level playing field for public and private water utilities.

The exception to this is where we consider that there are justifiable differences between the utilities or their services that require them to have different indicators. For example, where the legislative framework differs between water utilities, or where the proportionality of the outcome is substantially different (eg, where one water utility provides a service to 100 customers and another provides the same service to 10,000 customers).

Stakeholders generally support a single set of performance indicators

Stakeholders generally support a single set of performance indicators, identifying benefits such as:

- ▼ enabling the performance of utilities that provide the same services to be compared, and
- ▼ creating a level playing field for public and private water utilities in terms of regulatory costs imposed.

However, stakeholders agreed with our view that where there are justifiable differences between utilities, we should consider applying different indicators to different utilities, for example where:

- ▼ there are differences in the legislative framework (eg, Sydney Water and WaterNSW have a requirement to collect environment performance indicators)
- ▼ services are different (eg, WaterNSW does not provide retail services to customers), or

- ▼ utilities are different sizes (ie, it may not be appropriate to use customer surveys to inform customer satisfaction performance indicators where a water utility has a small number of customers).³⁴

We generally agree with the positions made by stakeholders regarding our approach to a single set of performance indicators and have considered this feedback in our assessment of indicators for each performance area.

4.5 Utilities will continue to collect their own data

We consider that in order to effectively undertake operations, water utilities are likely to continue to collect information on their operations and performance in addition to the IPART performance indicators.

The collection of operations and performance indicators is good business practice and is consistent with the general duties of directors under the *Corporations Act 2001* (Cth).

Public water utilities will also continue to be required to report on NWI indicators annually. Further, Hunter Water and Sydney Water have stated that they will continue to collect much of the information necessary to report against the existing IPART performance indicators (as well as other indicators).³⁵ These indicators are collected in order to guide operations, undertake analysis, provide internal controls, improve efficiency, and to inform planning and decision making.³⁶

Hunter Water indicated that although it will continue to collect performance indicators internally for business reasons, the removal of any performance indicator from the IPART performance indicators results in a reduction in costs to the utility.³⁷ Hunter Water stated that there are additional costs in satisfying audit requirements (both internal and external audits) that arise once a utility is required to report on an indicator.³⁸

4.6 We do not intend to collect lead indicators

Performance indicators can be either lag or lead indicators. To date our performance indicators have been on lag indicators. Lag indicators are a historical measure, typically output-oriented and easy to measure, but can be hard to influence.

³⁴ IPART Transcript, Stakeholder Roundtable, 20 March 2018, p14; Flow Systems, Submission to IPART review of water quality performance indicators, 13 March 2018, p1; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p9; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p8; WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018; Department of Planning and Environment, Submission on water utility performance indicators review, 9 March 2018, p2; PIAC, Response to Water Utility Performance Indicators Review – Draft Report, 22 May 2018.

³⁵ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p7; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p4.

³⁶ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p7.

³⁷ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p2.

³⁸ Ibid, p2.

In contrast, lead indicators are predictive and are typically input-oriented, harder to measure but allow a pro-active response to influence the regulatory outcome. Because lead indicators correlate to expected future performance, they are most usefully employed by organisations who intend to make proactive decisions or adjustments within a hands-on management approach. Clarity about the outcome sought is an important precursor to effective use of lead indicators.

The feedback we received from stakeholders did not clearly identify any value in collecting and reporting on lead indicators in the IPART performance indicators at this time.

We will continue our existing approach and will not collect lead indicators. However we note that our compliance framework includes monitoring of lead indicators through our reporting requirements and licence audits. In particular, water utilities monitor water quality critical control points (CCPs) and are required to report breaches of CCPs to NSW Health and/or IPART. Water utilities also undertake condition assessments of assets, which could provide information about future performance. Hunter Water notes that this type of information is available to IPART and auditors on request and is routinely provided and considered through IPART's annual audit process.³⁹

DPE recommended that we explore options around demand forecast lead indicators, which we consider in section 5.2.⁴⁰

4.7 We may investigate incentivising performance in the future

In our Issues Paper we sought feedback from stakeholders about whether it was appropriate for us to have a role in incentivising performance through performance indicators.

There is some support from stakeholders for using performance indicators to actively incentivise performance.⁴¹ However, we note the views of Hunter Water, Sydney Water and WaterNSW that:

- ▼ linking performance incentives to the performance standards in the operating licences is a better approach than linking incentives to IPART's performance indicators, and
- ▼ further investigation, including research, analysis and stakeholder consultation, is required to consider incentives for performance beyond the reputational incentives arising from publishing information.⁴²

We could investigate further incentivising performance in the context of future price reviews.

³⁹ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p8.

⁴⁰ Department of Planning and Environment, Submission on water utility performance indicators review, 9 March 2018, p2.

⁴¹ DPE, Submission on water utility performance indicators review, 9 March 2018, p2; Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p1; Office of Emergency Management, Submission to IPART review of water utility performance indicators, 8 March 2018.

⁴² Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p8; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p5; Sydney Water Corporation, Submission on the review of water utility performance indicators and Reporting Manual, 24 May 2018, p2; WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018.

4.8 We will continue to collect data for our administrative purposes

Collecting data to allow the calculation of WIC Act retail supplier licence fees

We use some of our existing performance indicators to assist with administration of WIC Act retail supplier's licence fees. The Minister for Energy and Utilities determines a methodology for calculating the annual licence fees.⁴³ We collect data to allow the calculation of the annual fee for each licence according to that methodology. For WIC Act retail suppliers this includes information about the volume of water and non-potable water supplied, and the volume of sewage collected.⁴⁴ To date we have referred to this data as 'performance indicators', however this data does not measure performance.

In our Issues Paper and Draft Report we proposed to continue to collect this data, but rename the data set to 'licence data' in our reporting manuals. Flow Systems was the only affected water utility to provide a submission to our review, and it welcomes our collection of licence data.⁴⁵ From 2018, we will collect licence data from WIC Act licensees to allow the calculation of the annual fee for each licence according to that methodology, this replaces three of the performance indicators WIC Act licensees are required to provide to IPART.

The definitions for our licence data are in Appendix B.

Collecting data to understand the number of customers served

We are interested in monitoring the number of customers served by retail water utilities. This information:

- ▼ allows us to understand the impact of our role as a regulator
- ▼ informs our risk-based compliance activities (ie, an understanding of the consequence of failure or non-compliance of a particular utility or scheme), and
- ▼ may provide information to stakeholders on how well the Hunter Water Act, Sydney Water Act, WIC Act and WIC Regulation is meeting its objectives.

Hunter Water and Sydney Water already provide some data on the number of customers served through their reporting on NWI indicators on customer numbers.⁴⁶ This means that we only require Hunter Water and Sydney Water to report on licence data on customer numbers for recycled water.

Decisions

- 5 WIC Act retail suppliers must provide the following licence data to IPART by 1 September of each year:
 - L1 Total volume of water supplied (ML)
 - L2 Total volume of non-potable water supplied (ML)
 - L3 Total volume of sewage collected (ML)

⁴³ *Water Industry Competition Act 2006*, s 14.

⁴⁴ WIC Act network operator licence fees are calculated based on the capacity of the plant which is information we collect during the WIC Act licence application process and our compliance monitoring.

⁴⁵ Flow Systems, Submission to IPART water utility performance indicators review 2018, 24 May 2018.

⁴⁶ NWI indicators C2, C3, C6, C7.

-
- L4 Connected residential properties – water supply (000s)
 - L5 Connected non-residential properties – water supply (000s)
 - L6 Connected residential properties – wastewater (000s)
 - L7 Connected non-residential properties – wastewater (000s)
- 6 Hunter Water, Sydney Water and WIC Act retail suppliers must provide the following licence data to IPART by 1 September of each year:
- L8 Connected residential properties – recycled water supply (000s)
 - L9 Connected non-residential properties – recycled water supply (000s)

5 Performance – Water quality and quantity

This chapter discusses the water quality and quantity performance area, which focuses on water utilities' activities relating to water quality and quantity (including recycled water), incorporating the maintenance of certain standards of water quality as well as ensuring an efficient level of water conservation (quantity).

5.1 Water quality

The desired outcome for water quality is for water utilities to provide drinking water and recycled water that is safe and fit for purpose. This means maintaining an appropriate level of water quality for the intended use.

We will not collect performance indicator information for water quality

We assess water quality outcomes through regular continuous monitoring and reporting as well as regular expert audit. This is because a non-compliance with the water quality requirements may have significant consequences to public health and customers.

There appears to be limited need to use performance indicators to monitor performance of water utilities for water quality because:

- ▼ all water utilities are required to have management systems or plans in place to meet the Australian Drinking Water Guidelines (ADWG) and Australian Guidelines for Water Recycling (AGWR)
- ▼ all water utilities are required to report on any non-compliance
- ▼ in addition to reporting to IPART, all water utilities have some obligations to report to NSW Health, customers, or the Minister for Public Health on water quality outputs and outcomes, and
- ▼ water utilities' performance in meeting those obligations is generally good.






In considering whether to require water quality performance indicators we assessed those indicators against our performance indicator criteria in Figure 5.1.

Decision

- 7 Given that IPART assesses water quality outcomes through regular continuous monitoring and reporting, IPART does not require water utilities to report on performance indicators for water quality.

Figure 5.1 Assessment of water quality performance indicators

► Water quality performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the water quality performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Stakeholders generally agreed that IPART water quality indicators are not required

We did not receive any feedback from stakeholders that are using the existing water quality indicators.

NSW Health confirmed that it does not widely use the existing IPART performance indicators for water quality, and that they are of limited benefit from a public health perspective.⁴⁷ For NSW Health, the most useful indicator of water quality performance is whether a utility is implementing the frameworks that are in the ADWG and AGWR.⁴⁸ NSW Health noted there are difficulties with identifying a single indicator and would contribute to the discussion if further indicators were to be developed.⁴⁹ We assess the implementation of the ADWG and AGWR frameworks through licence compliance audits.

Flow Systems, Hunter Water, Sydney Water, WaterNSW and the Department of Planning and Environment (DPE) agree that the existing compliance framework adequately covers water quality performance and performance indicators are not required.⁵⁰

⁴⁷ IPART Transcript, Stakeholder Roundtable, 20 March 2018, p5.

⁴⁸ Ibid, p5.

⁴⁹ Ibid, p5.

⁵⁰ IPART Transcript, Stakeholder Roundtable, 20 March 2018, p5; Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p10; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p7; WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018; Department of Planning and Environment, Submission on water utility performance indicators review, 9 March 2018, p2.

WaterNSW is required to report separately on catchment health indicators

In addition to water quality, WaterNSW is required to report to IPART on catchment health indicators. WaterNSW collects five indicators. These are a subset of indicators developed, approved and published by the NSW Government (see also section 2.4). IPART is not making any changes to these indicators. However, we will no longer require annual reporting by WaterNSW. Instead we will continue to require WaterNSW to report directly to the appointed auditor⁵¹ when requested by the appointed auditor.⁵²

WaterNSW notes the duplication between the existing requirements to report on two of the catchment health performance indicators annually to IPART which are also required under WaterNSW's Water Access Licence and Water Sharing Plans.⁵³ The indicators are on the availability of surface water. We understand WaterNSW reports this data to the: ⁵⁴

- ▼ BOM as part of the National Water Account
- ▼ Australian Bureau of Statistics for the Annual Water Supply and Sewerage Services Survey, and
- ▼ Department of Industry – Water, as part of requirements set out in relevant Water Access Licences.

We understand the OEH's Environmental Water Program and Science Division uses the catchment health indicators.⁵⁵

We agree with WaterNSW that it is more efficient for WaterNSW to provide catchment health indicators as part of the catchment audit undertaken by the NSW Government than to provide that information to IPART.⁵⁶ We will no longer require annual reporting of catchment health indicators to IPART.

Decision

- 8 Given that WaterNSW reports on catchment health indicators as part of the catchment audit undertaken by the NSW Government, IPART does not require WaterNSW to report catchment health indicators annually to IPART.

5.2 Water quantity

We consider that one of the desired outcomes for water quantity is for water utilities to deliver the volume of water that customers demand in a way that enables water conservation, including leakage management, water efficiency, and demand management measures.

For the supply of bulk water by WaterNSW (capture-store-release or CSR water as it is defined in WaterNSW's operating licence), we consider the desired outcome is for WaterNSW's water order and delivery systems to perform to meet customer expectations and provide a level of service consistent with its performance standards.

⁵¹ The Minister for Regional Water appoints an auditor to undertake catchment audits under s 42 of the *Water NSW Act 2014*.

⁵² Section 2.2.2, Water NSW Reporting Manual 2017-2022.

⁵³ Ibid, p5.

⁵⁴ Ibid, p5.

⁵⁵ OEH, Email correspondence, 12 April 2018.

⁵⁶ Ibid, p5.

We will collect water quantity performance indicator information for WaterNSW

We will collect water quantity performance indicator information for WaterNSW which align with its performance standards for water released for extraction and use under a customers access licence.⁵⁷ These indicators provide information on water delivery and account processing. This is consistent with our preferred approach to include performance indicators to align with performance standards.⁵⁸ WaterNSW supported this approach in its submission to our Issues Paper.⁵⁹

Decision

9 WaterNSW must report on the following indicators for water quantity:

- W1 Percent of Customers who place a Non-complying Water Order whom Water NSW contact within one working day to rectify that order
- W2 Percent of Water Orders which are Delivered within one day of the scheduled day of Delivery
- W3 Percent of complying Temporary Trades within the State in the financial year which are processed within five working days of Water NSW's receipt of a correct application and fee
- W4 Percent of Interstate Temporary Trades (except to South Australia) in the financial year which are processed within 10 working days of Water NSW's receipt of a correct application and fee
- W5 Percent of Interstate Temporary Trades to South Australia in the financial year which are processed within 20 working days of Water NSW's receipt of a correct application and fee

We have assessed the water delivery and account processing performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 5.2. In considering the benefits and costs, we consider collecting performance indicator information regarding this performance standard provides transparency to customers and stakeholders, and does not result in any additional costs due to the existing broader reporting and requirements regarding public water utility system performance standards.






⁵⁷ Water NSW Operating Licence 2017-2022, cl.4.2

⁵⁸ See also chapter 6 of this report.

⁵⁹ WaterNSW, Submission to the IPART review of water utility performance indicators, March 2018, pp3-4, 7.

Figure 5.2 Assessment of water delivery and account processing performance indicators

► Water delivery and account processing indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the water delivery performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Water utilities already report on water conservation, including recycled water

We considered whether to include performance indicators to measure the volume of water sourced and supplied, aligning with the desired outcome of water conservation. Considering trends over time, this would show the amount of water used and could be used to indicate how the utility is performing with its licence obligations on water quantity.






Information on volumes of water sourced, water supplied (including recycled water) and sewage collected is already collected and published through other means. We do not require the water utilities to report on volume of water performance indicators as we do not have sufficient data to determine whether the benefits of collecting and publishing the data would outweigh the cost of collecting it. We have assessed the volume of water performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 5.3.

Flow Systems suggests we adopt a performance indicator that measures how much drinking water is saved by using recycled water instead of drinking water.⁶⁰ We will collect this information as licence data rather than as a performance indicator (see section 4.8).

⁶⁰ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2.

Figure 5.3 Assessment of volume of water performance indicators

► Volume of water performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the volume of water indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

There are other ways for water utilities to provide detailed water conservation, usage and demand forecast information

DPE recommended that we explore options around best-practice performance metrics for water conservation and water usage, and demand forecast lead indicators.⁶¹

We have investigated this proposal and consider that this information is better provided through a data sharing arrangement between water utilities and DPE (Figure 5.4). We understand DPE's focus is on information from Sydney Water and WaterNSW.

At our Stakeholder Roundtable, DPE noted that it uses water quantity performance indicators to develop water supply and demand measures in the Metropolitan Water Plan.⁶² DPE currently sources this information from the Urban NPR.






We have assessed the demand forecast performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 5.4.

⁶¹ DPE, Submission on water utility performance indicators review, 9 March 2018, p2.

⁶² IPART Transcript, Stakeholder Roundtable, 20 March 2018, p10.

Figure 5.4 Assessment of demand forecast performance indicators

► Demand forecast performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the demand forecast performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

6 Performance – Assets

This chapter discusses the assets performance area, which relates to ensuring water utilities maintain assets to provide appropriate and consistent levels of water and wastewater network services to their customers. To do this, we expect water utilities to meet the obligations outlined in relevant service standards, and implement management systems or plans, to track and maintain asset condition.

PWUs' licences require them to have an asset management system in place for carrying out the functions required of the utilities. The WIC Regulation requires WIC Act network operators to have an infrastructure operating plan (IOP) before commencing to operate water infrastructure commercially.⁶³ As WIC Act retail suppliers do not construct, maintain or operate assets, we will not collect information on the performance of their assets.

6.1 Service interruptions

We consider the desired outcome for service interruptions is for water utilities to provide a level of service consistent with their performance standards.

We will collect performance indicator information which align with service interruption performance standards

We will collect performance indicator information for service interruptions on the extent that customers are impacted by service interruptions. Our performance indicators align with water utilities' existing performance standards. These performance standards are for the management of assets, and the level of service provided to customers. Water utilities and other stakeholders broadly support the approach of aligning performance indicators with performance standards, although some stakeholders considered that there should be indicators in addition to those on the service interruption performance standard.

Decisions

- 10 Hunter Water, Sydney Water and WIC Act network operators must report on the following IPART performance indicators for service interruptions:
 - A1 Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours
 - A2 Number of properties that experience three or more unplanned water interruptions that each lasts for more than one hour
- 11 WIC Act network operators must report on the following IPART performance indicators for service interruptions:
 - A3 Total number of unplanned interruptions – water supply

⁶³ *Water Industry Competition (General) Regulation 2008*, Sch 1, cls 6 and 13.

- A4 Average duration of unplanned water interruptions – water supply
- 12 Sydney Water must report on the following IPART performance indicators for service interruptions:
- A5 Percent of priority 6 breaks/leaks in drinking water mains that the water utility responded to within 3 hours
 - A6 Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 6 hours
 - A7 Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 24 hours
 - A8 Percent of priority 4 breaks/leaks in drinking water mains that the water utility responded to within 5 days
- 13 WaterNSW must report on the following IPART performance indicators on service interruptions:
- A9 Percent of Water Orders rescheduled, which are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay

We considered both average and threshold approaches to monitoring performance

There are two alternatives for measuring performance for service interruptions:

- ▼ number of customers interrupted for longer than a particular threshold (this can also be based on a number of repeat interruptions), or
- ▼ average duration for all interruptions.

As we discussed in our Issues Paper, there are positives and negatives with each approach. The threshold approach can highlight instances of poor performance and focus utilities' attention to improve those instances. However, it could inadvertently result in water utilities not placing sufficient urgency on those incidents that are likely to fall below the threshold. Alternatively, using an average of all incidents can provide an incentive for utilities to focus on improving all incidents and reduces the impact of one-off events, however this approach gives poor performance outliers a lower weighting, and therefore limits the use of the indicator in targeting events.

The existing approach for the Hunter Water and Sydney Water performance indicators is to use the threshold approach. However, our existing performance indicators include 14 performance indicators for WIC Act licensees on service interruptions, and all use the average approach.⁶⁴

There is no clear difference between the services provided by the different water utilities (PWU and WIC Act licensees) which would justify a different approach to performance indicators.

In our Issues Paper we sought views from stakeholders regarding the preferred approach. Flow Systems and DPE prefer the threshold approach, indicating it would result in a better

⁶⁴ IPART, *Network Operator's Reporting Manual*, August 2015, pp 42-43; IPART, *Retail Supplier's Reporting Manual*, June 2016, p 44.

measure of performance.⁶⁵ Hunter Water prefers a combination of both average and threshold indicators.⁶⁶ Sydney Water did not indicate a preference for either approach, noting that the existing threshold approach for PWUs does not allow for normalisation across the customer or asset base, and that an average approach would allow a greater ability to compare performance of water utilities.⁶⁷

We continue to primarily use threshold indicators, combined with one average indicator (A4). We note that although our performance indicator A4 would only apply to WIC Act licensees, both Hunter Water and Sydney Water are already required to report on average indicators through the NWI indicators (we discuss this further below).

Most of our service interruptions performance indicators relate to water continuity performance standards

Most of the service interruptions performance indicators (A1, A2, A3, A4 and A9) we are implementing are developed with regard to existing performance standards. We consider that where water utilities provide the same service, each water utility should be reporting on the same indicators for service interruptions, regardless of whether it is a PWU or WIC Act licensee.

We will apply the same performance indicators for water utilities with a network or retail function

The operating licences for both Hunter Water and Sydney Water require the utilities to have two system performance standards⁶⁸ regarding water continuity:⁶⁹

- ▼ Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours, in the preceding financial year, as defined in the licence.
- ▼ The number of properties that experience three or more unplanned water interruptions that each lasts for more than one hour, in the preceding financial year, as defined in the licence.

These utilities are required to report on their performance on these two system performance standards.

Where relevant, WIC Act licensees' IOPs include provisions about performance standards for service interruptions.⁷⁰ The IOP is also required to outline the maintenance, monitoring and reporting of standards of service.⁷¹

⁶⁵ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2; DPE, Submission on water utility performance indicators review, 9 March 2018, p2;

⁶⁶ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p14.

⁶⁷ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p7

⁶⁸ The setting of performance standards does not form part of this review.

⁶⁹ Hunter Water Operating Licence 2017-2022, cl 3.3.2; Sydney Water Operating Licence 2015-2020, cl 4.2.2.

⁷⁰ Service interruptions performance standards may not be relevant for some WIC Act licensees, it would depend on the infrastructure licenced.

⁷¹ *Water Industry Competition (General) Regulation 2008*, cl 6(1).

Flow Systems proposed that the water utility that causes a service interruption should have the service interruption attributed to it.⁷² In our view where a customer's service is interrupted, the service interruption should be attributed to the water utility that has the obligation to supply that customer. Further, where a water utility considers it useful to customers or other stakeholders to provide further information about service interruptions, we consider there is no impediment to a water utility making that information available.

Our approach is to require water utilities that have a network function, ie, Hunter Water, Sydney Water and WIC Act network operators to report on performance indicators which align with the system performance standards for service interruptions to properties in the Hunter Water and Sydney Water operating licences. These indicators are:

- A1 Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours
- A2 The number of properties that experience three or more unplanned water interruptions that each lasts for more than one hour

We will require water utilities that have a network function, ie, Hunter Water, Sydney Water, and WIC Act network operators to report on performance indicators which align with the system performance standards for the number and duration of service interruptions to properties in the Hunter Water and Sydney Water operating licences. These indicators are:

- A3 Total number of unplanned interruptions – water supply
- A4 Average duration of unplanned water interruptions – water supply

However, as Hunter Water and Sydney Water would report the information we would collect for A3 and A4 through the NWI indicators (IC17 and C15 respectively), we are limiting the collection of A3 and A4 to WIC Act licensees.

We consider that collecting performance indicator information on performance standards provides transparency to customers and stakeholders. These indicators reduce the duplication of reporting for both PWUs and WIC Act licensees in comparison to the existing requirements. Further there is no additional cost to PWUs due to the existing broader reporting requirements regarding public water utility system performance standards. Although it would result in minor additional costs to WIC Act network operators, this would be offset by the overall reduced reporting obligations.

Hunter Water and Sydney Water support our position to require reporting on indicators linked to performance standards.⁷³ Sydney Water suggested including average duration of unplanned water interruptions as an indicator, however this does not align with the service interruption performance standard measure so we do not support this approach at this time.⁷⁴ Flow Systems supports WIC Act licensees having the same performance indicators to PWUs for service interruptions.⁷⁵ We did not receive any submissions from other WIC Act licensees.

⁷² Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2.

⁷³ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, pp14-15; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p8.






⁷⁴ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p8.

⁷⁵ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2.

We have assessed the service interruptions performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.1.

Figure 6.1 Assessment of service interruption performance indicators – network or retail function

► Service interruptions – network or retail function

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the service interruptions performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Note: Hunter Water and Sydney Water report on NWI indicators which align with IPART performance indicator A3 and A4.

We agree with WaterNSW's suggestion for a service interruption performance indicator

Under its licence WaterNSW must manage service interruptions in accordance with its asset management system⁷⁶ and must also meet the CSR Water Service Interruptions Performance Standard.⁷⁷ WaterNSW is required to provide IPART with an annual compliance and performance report with respect to WaterNSW's performance regarding service interruptions.⁷⁸ There are not any existing service interruption performance indicators required by the WaterNSW Reporting Manual.

We agree with WaterNSW's suggestion that we could create a measure of service interruption based on its existing CSR Water Service Interruptions Performance Standard on rescheduling of water orders.⁷⁹ Our performance indicator A9 aligns with the CSR Water Service Interruptions Performance Standard:

A9 Percent of Water Orders rescheduled, which are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay

⁷⁶ Water NSW Operating Licence 2017-2022, cl 4.2.3.

⁷⁷ Water NSW Operating Licence 2017-2022, cl 4.2.3.

⁷⁸ Defined as 100% of Water Orders rescheduled are rescheduled in consultation with an affected customer within 1 working day of an expected water shortage; or other delivery delay in the Water NSW Operating Licence 2017-2022, cl 4.3.4.






⁷⁹ WaterNSW, Submission to the IPART review of water utility performance indicators, March 2018, p8.

We consider collecting performance indicator information for performance standards provides transparency to customers and stakeholders, and does not result in any additional costs due to the existing broader reporting requirements regarding WaterNSW's system performance standards.

We have assessed the demand forecast performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.2.

Figure 6.2 Assessment of service interruption performance indicators – WaterNSW CSR Water

► Service interruptions – WaterNSW CSR Water

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the service interruptions performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Sydney Water will continue to report on main break response times

As a result of our 2015 review of Sydney Water's operating licence the main break response times were included in the reporting manual as performance indicators rather than being included in the licence as system performance standards. Sydney Water's licence also requires it to report, in accordance with the Reporting Manual, on response times for water main breaks and leaks.⁸⁰

We are retaining the mains breaks and leaks indicators that were previously incorporated into the Reporting Manual for Sydney Water.⁸¹ As discussed above, these indicators recently changed from system performance standards to performance indicators. We will retain them as performance indicators for Sydney Water in the short-term to determine the continued effectiveness of the information; despite our assessment in Figure 6.3 we will review this position in our current Sydney Water operating licence review. Sydney Water supports our approach.⁸²






⁸⁰ Sydney Water Operating Licence 2015-2020, cl 4.3, other water utilities do not have this requirement.

⁸¹ IPART, *Sydney Water Reporting Manual*, August 2017, IPART performance indicators I9 – I12

⁸² Sydney Water Corporation, Submission on the review of water utility performance indicators and Reporting Manual, 24 May 2018, p4.

Figure 6.3 Assessment of main break and leaks performance indicators – Sydney Water

► Sydney Water main break and leaks performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the water quantity performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

We considered performance indicators for planned service interruptions

In its submission to our Issues Paper, Sydney Water proposed the following indicators for planned service interruptions:⁸³

- ▼ Occurrence of water interruptions to affected properties (i.e. the number of properties experiencing 3 or more planned or unplanned water interruptions of more than one hour duration) – per 1,000 properties supplied by the utility.⁸⁴
- ▼ Average duration of planned water interruption (minutes).

In our Draft Report we considered that in the absence of a performance standard there is no reason to include a performance indicator for planned service interruptions. We have not received information from stakeholders to suggest that stakeholders are using performance indicators for planned service interruptions. We currently monitor the compliance of water utilities with asset management obligations, including the implementation of PWU Asset Management Systems and WIC Act licensee IOPs. We consider our compliance monitoring framework provides us with sufficient performance monitoring information. In its response to our position in the Draft Report, Sydney Water indicated its support for our proposal not to include performance indicators for planned service interruptions.⁸⁵

We have assessed the planned service interruption performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.4.






⁸³ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p8.

⁸⁴ This is an amended version of the existing Hunter Water and Sydney Water IPART performance indicator I2.

⁸⁵ Sydney Water Corporation, Submission on the review of water utility performance indicators and Reporting Manual, 24 May 2018, p4.

Figure 6.4 Assessment of planned service interruption indicators

► Planned service interruption performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the planned interruption performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

6.2 Water pressure

We consider the desired outcome for water pressure is for water utilities to provide a level of service consistent with their performance standards.

We will collect water pressure performance indicator information

We will collect water pressure performance indicator information on the extent that customers are impacted by water pressure failure. We will collect this information from water utilities that have a network function, ie, Hunter Water, Sydney Water and WIC Act network operators. We will collect information against one performance indicator which aligns with water utilities' existing performance standard. Water utilities and other stakeholder broadly support this approach.

Decision

- 14 Hunter Water, Sydney Water and WIC Act network operators must report on the following IPART performance indicator for water pressure:
 - A10 Number of properties that experience a water pressure failure (as defined in the water utility's licence)






We consider this water pressure indicator is sufficient in monitoring the performance of water utilities on water pressure and there is no need for any additional performance indicators.

We consider collecting water pressure performance indicator information provides transparency to customers and stakeholders. Further, for PWUs it does not result in any additional costs due to the existing broader reporting requirements on public water utility system performance standards. As the addition of this indicator changes the focus for the reporting on water pressure from the existing indicators, this may result in minor additional costs to WIC Act network operators, which would be offset by the overall reduced reporting obligations compared to the existing performance indicators.

We have assessed the water pressure performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.5.

Figure 6.5 Assessment of water pressure performance indicator

► Water pressure performance indicator

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the water pressure performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria?	

Water pressure failure is defined differently for each water utility

A water pressure failure is defined differently for each water utility depending on the performance standard in its licence or a WIC Act network operator's IOP (see definitions in Appendix A).

The operating licences for both Hunter Water and Sydney Water require the utilities to have a system performance standard for water pressure.⁸⁶ Each standard is based on the:

- ▼ Number of properties that experience a water pressure failure in the preceding year, as defined in the licence.

Where relevant, WIC Act network operators' IOPs include provisions about performance standards for water pressure.⁸⁷ The IOP is also required to outline the maintenance, monitoring and reporting of standards of service.

⁸⁶ Sydney Water Operating Licence 2015-2020, cl 4.2.1; Hunter Water Operating Licence 2017-2022, cl 3.3.1.

⁸⁷ Water pressure performance standards may not be relevant for some WIC Act licensees, it would depend on the infrastructure licenced.

We consider that both PWUs and WIC Act network operators should report on a performance indicator which aligns to the existing PWU water pressure performance standard measure.

Water utilities support our approach to water pressure performance indicators

Flow Systems, Hunter Water, and Sydney Water⁸⁸ support our view that if we align a performance indicator to a water pressure performance standard, there is no need for any additional water pressure performance indicators.

Fire & Rescue NSW (FRNSW) also supports our inclusion of a water pressure performance indicator; however it also recommends we collect further information on water pressure and water flows (we discuss this in more detail below).⁸⁹

We did not receive submissions on water pressure performance indicators from other stakeholders.

Information on water pressure and flows for firefighting can be provided in other ways

FRNSW recommends we include in our performance indicators areas of a water utility's water supply network where pressure and flow is less than 150 kilopascals at 10 litres per second.⁹⁰ We understand that FRNSW seeks a mapping tool or set of maps that shows this information.⁹¹

FRNSW has raised concerns around meeting water flow required for firefighting from the drinking water network and the potential for large infrastructure solutions in some instances to be more efficient than solutions at the individual premises or development scale.⁹² At present there is no regulatory requirement for NSW water utilities to provide water for firefighting purposes.

We consider a mapping tool or set of maps is not a performance indicator and can be developed and shared between water utilities and FRNSW under a bilateral agreement. The existing memorandums of understanding between FRNSW and Hunter Water and Sydney Water could facilitate this process. We have assessed the water flows for firefighting performance indicators against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.6.

We are uncertain of the broader costs and benefits associated with this proposal. For this reason in 2015 we proposed the Government undertake a comprehensive review examining firefighter water capacity requirements in NSW.⁹³ To date a review has not been undertaken.

We are also considering the provision of water for firefighting in our current review of developer charges and backlog sewerage charges for metropolitan water agencies. Our draft

⁸⁸ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2,

⁸⁹ Fire & Rescue NSW, Submission to Issues Paper – Review of Water Utilities Performance Indicators, 14 March 2018, pp9-10.

⁹⁰ Ibid, pp9-10.

⁹¹ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp14-18.

⁹² Fire & Rescue NSW, Submission to Issues Paper – Review of Water Utilities Performance Indicators, 14 March 2018, pp9-10.






⁹³ Recommendation 3, IPART, Sydney Water Corporation Operating Licence Review, May 2015.

decision in that review would set a new charge for a voluntary upgrade of services to existing properties. This charge:

- ▼ would provide a way to fund infrastructure upgrades in built-in areas, to increase water pressure and flow for firefighting, and
- ▼ would share upgrade costs between existing properties (on a voluntary basis) and new developments.⁹⁴

Figure 6.6 Assessment of water flows performance indicators

► Water flows performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the water flows performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

6.3 Wastewater overflows

We consider the desired outcome for wastewater overflows is for water utilities to provide a level of service consistent with their performance standards.

We will collect performance indicator information that aligns to wastewater overflow performance standards

We will collect performance indicator information for wastewater overflows on the extent that customers are impacted by uncontrolled wastewater overflows in dry weather. We will collect information against two performance indicators which align with water utilities' existing performance standards. Water utilities and other stakeholders broadly support this proposal.

⁹⁴ 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.

Decision






15 Hunter Water, Sydney Water, and WIC Act network operators must report on the following IPART performance indicators on wastewater overflows:

- A11 Number of properties (other than public properties) that experience an uncontrolled wastewater overflow in dry weather
- A12 Number of properties (other than public properties) that experience three or more uncontrolled wastewater overflows in dry weather

We have assessed the wastewater overflow performance indicators against the criteria in Figure 3.1. Our assessment of the critical is set out in Figure 6.7.

Figure 6.7 Assessment of wastewater overflows performance indicators

► Wastewater overflows performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the wastewater overflows performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

We considered other performance indicators for wastewater overflows

In our Issues Paper we identified that in addition to indicators for performance standards for wastewater overflows in dry weather, there could be other performance indicators monitoring:

- ▼ number of customers being impacted multiple times within the year
- ▼ number of overflow instances occurring throughout the network
- ▼ duration of wastewater overflows, and
- ▼ response time to contain wastewater overflows.

Water utilities did not strongly support collecting the above performance indicators in addition to those related to performance standards.⁹⁵

Hunter Water considers that incidences of wastewater overflows in dry weather are adequately covered by system performance standards and existing NWI indicators.⁹⁶ Sydney Water provided feedback on, but did not generally support the inclusion of additional indicators. Sydney Water did note that there may be an opportunity to consider a breaking down some wastewater overflow indicators to provide further understanding of impact or type of overflow, for example:⁹⁷

- ▼ Private vs public properties.
- ▼ Dry weather vs wet weather vs internal surcharges.

In its submission to our Issues Paper, Flow Systems proposed adopting additional performance indicators for wastewater overflows, for example, a separate performance indicator to capture overflows that are caused by third party damage to water utility assets.⁹⁸

With regard to the above proposals, we consider water utilities are always in a position to provide commentary on reasons for a variation in performance or further information regarding performance. We have updated the water utility reporting manuals to reflect that water utilities have the option to provide further information on:

- ▼ major factors (both positive and negative) that have influenced the water utility's performance, both within and beyond the water utility's control, and
- ▼ reasons for any variation (both positive and negative) between water utility's performance in the financial year and with performance in prior years.

Further, where a water utility considers it useful to customers or other stakeholders to provide further information about wastewater overflows, we consider there is no impediment to a water utility making that information available.

We also sought feedback from the EPA on the existing IPART wastewater overflow performance indicators. The EPA considers that these indicators should be included and are highly relevant, however the EPA confirmed that it does not use the existing wastewater overflow indicators, although it may use this type of information in the future.⁹⁹ In the absence of further information on the use or potential benefits of these potential performance indicators we have decided not to collect wastewater overflow data beyond those related to the performance standards.

⁹⁵ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp13-14; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, pp16-17; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p9.

⁹⁶ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, pp16-17.

⁹⁷ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p9.






⁹⁸ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p2.

⁹⁹ NSW EPA, Email correspondence, 29 March 2018; NSW EPA, Email correspondence, 13 April 2018.

We have assessed wastewater overflow performance indicators other than those related to performance standards against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 6.8.

Figure 6.8 Assessment of other wastewater overflows performance indicators

► Other wastewater overflow performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the other wastewater overflow indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

7 Performance – Environment

This chapter discusses the environment performance area, which relates to requiring the water utilities to manage any adverse impacts that their operations could have on the environment. This occurs primarily through meeting the requirements of environment legislation and licence obligations, including in some cases the maintenance of an environmental management system (EMS) or environmental management plans.

7.1 Environment

The desired outcome for the environment performance area is for water utilities to appropriately manage their impact on the environment.

Under the operating licences, each PWU is required to have an EMS certified to *Australian Standard ISO 14001: Environmental Management Systems*.¹⁰⁰ An EMS is a structured system designed to help organisations manage their impact on the environment. PWUs are also required to carry out all activities in accordance with their EMS.

The WIC Act requires the Minister to consider certain principles before the Minister grants a WIC Act licence, including the protection of the environment.¹⁰¹ Where appropriate, licences granted under the WIC Act include conditions on the protection of the environment. In some cases there are specific licence conditions on environmental management plans.

We use compliance monitoring (including self-reporting, public disclosure of information, and audits) to monitor the performance of water utilities with the environment obligations in their licences.

All water utilities are required to comply with the requirements of NSW environment legislation administered by the NSW Environmental Protection Agency (EPA) and the NSW Office of Environment and Heritage (OEH). Where relevant, the EPA issues Environment Protection Licences to water utilities. These licences require the water utilities to collect and publish pollution monitoring data as determined by the EPA.

The legislative frameworks of Sydney Water and WaterNSW require environment indicators to be compiled, this is discussed in more detail below.

¹⁰⁰ Hunter Water Operating Licence 2017-2022, cl 4.2.1; Sydney Water Operating Licence 2015-2020, cl 6.1.1; Water NSW Operating Licence 2017-2022, cl 5.2.1.

¹⁰¹ *Water Industry Competition Act 2006*, s 7(1)(a). Before granting a licence, the Minister must also be satisfied that the applicant has the capacity to carry out the activities in a manner that does not represent a significant risk of harm to the environment: *Water Industry Competition (General) Regulation 2008*, cls 7 and 11.

We will not collect environment performance indicator information unless there is a legislative requirement

At present, we publish, but do not use, the information that water utilities provide on environment performance indicators.

We consider water utilities would meet the desired environment outcomes if the water utilities comply with the environment legislative framework administered by the EPA and the environment obligations in their licences (eg, the PWU licence requirement to have and implement an EMS) (Figure 7.1). However, there are legislative requirements that Sydney Water and WaterNSW's operating licences require them to report on environment indicators.

We would continue to monitor the compliance of all water utilities with the environment obligations in their licences.

There is broad support from water utilities for our approach.¹⁰² Other stakeholders did not provide submissions on this issue.

We will not collect environment performance indicator information for Hunter Water, WIC Act network operators and WIC Act retail suppliers.

Decision






- 16 Given that water utilities are required to comply with the environment legislative framework and both Sydney Water and WaterNSW are required under their legislation to report on environmental indicators, IPART does not require Hunter Water and WIC Act licensees to report on performance indicators for the environment.

We have assessed environment performance indicators for Hunter Water and WIC Act licensees against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 7.1.

¹⁰² Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p3; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p19; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p11; WaterNSW, Submission to the IPART review of water utility performance indicators, March 2018, p8.

Figure 7.1 Assessment of environment performance indicators – Hunter Water and WIC Act licensees

► Environment performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the environment performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Sydney Water's obligations to report against environment performance indicators

Sydney Water's operating licence requires it to: ¹⁰³

- ▼ prepare indicators on the direct impact of its activities on the environment
- ▼ monitor and compile data on those indicators, and
- ▼ report on those indicators in accordance with the Reporting Manual.

We are reducing the number of environment performance indicators for Sydney Water

We are reducing the number of environment performance indicators for Sydney Water from 14 to ten. This reduction arises by removing environment indicators that are reported elsewhere (see discussion below).

Decision

17 Sydney Water must report on the following IPART performance indicators for the environment:

- E1 Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills
- E2 Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption

¹⁰³ *Sydney Water Act 1994*, s. 14(1)(d) requires that the operating licence contain a condition requiring Sydney Water to compile indicators to enable preparation of an annual report on its performance, and to provide information for a year to year comparison on its performance in this area; Sydney Water Operating Licence 2015-2020, cl 6.2.1.

-
- E3 Total number of Controlled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main
 - E4 Total number of Uncontrolled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main
 - E5 Estimated total mass of biosolids produced by the water utility
 - E6 Percent of solid waste Recycled or Reused expressed as a percentage of solid waste generated
 - E7 Estimated total mass of solid waste generated by the water utility
 - E8 Total area of clearing of native vegetation
 - E9 Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility
 - E10 Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility

As we do not use the information relating to Sydney Water's existing environment performance indicators, our Issues Paper sought stakeholder views on the most appropriate environment indicators for Sydney Water to compile. In response Sydney Water provided a comprehensive assessment of its existing environment indicators (Table 7.1).¹⁰⁴

¹⁰⁴ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp11-14.

Table 7.1 Sydney Water response to existing IPART environment indicators

Existing IPART performance indicator Sydney Water		Sydney Water comment
E1	Total number of proceedings and Penalty Notices under the Protection of the <i>Environment Operations (POEO) Act 1997</i> issued to the water utility.	No suggested change. Information also publically available at NSW EPA Public register at epa.nsw.gov.au
E2	Total number of proceedings and Penalty Notices under the <i>Protection of the Environment Operations (POEO) Act 1997</i> issued to contractors engaged by the water utility.	No suggested change. Information also publically available at NSW EPA Public register at epa.nsw.gov.au
E3	Total electricity consumption by water assets (kWh/ML of water supplied to be included).	No suggested change.
E4	Total electricity consumption by sewer assets (KWh/ML of sewage collected).	No suggested change.
E5	Electricity consumption from renewable sources or generated by the water utility expressed as a percentage of total electricity consumption.	No suggested change.
E6(S)	Total volume of Controlled Sewage Overflows that occur in dry weather, expressed as a percentage of total sewage effluent discharged to the environment.	<p>The indicator does not adequately reflect Sydney Water's performance and should be changed for the following reasons:</p> <p>The total volume of effluent discharged from our treatment plants is so large, that sewage overflow volumes when reported as a proportion of the total become a relatively insignificant percentage (0.01%). This provides little value and does not drive performance improvements.</p> <p>The definition of controlled overflow means from a designed overflow structure. Very few overflows in dry weather occur from designed overflow structures. In addition, we only capture the volume if the overflow has been deemed non-compliant (ie Priority 6 > 3hrs to cease the overflow, or Priority 5 > 5hrs to cease the overflow). This means that we are only capturing a proportion of the volume discharged from controlled overflows in our reporting.</p> <p>Suggest removing this indicator and replacing it with a combination of the following possible indicators:</p> <ul style="list-style-type: none"> ▼ Total number of controlled sewage overflows that occur in dry weather that discharged to the environment, per km of sewer main ▼ Total number of uncontrolled sewage overflows that occur in dry weather that discharged to the environment, per km of sewer main
E7(S)	Percentage of trade waste customers in compliance with their wastewater discharge limits as outlined in their water utility trade waste agreements.	No suggested change.
E8	Total mass of biosolids produced by the water utility.	Biosolids are a waste product of existing activities and data could be captured under E9.
E9	Percent of solid waste recycled or reused	Suggest changing indicator to only report on the

Existing IPART performance indicator Sydney Water		Sydney Water comment
	expressed as a percentage of solid waste generated.	percent recycled/reused of waste streams that can be recycled (eg, contaminated land, asbestos waste, acid solvate soils would be excluded from total). We suggest separating this indicator into: <ul style="list-style-type: none"> ▼ utility generated and controlled waste ▼ contractor generated and controlled waste.
E10(S)	Total mass of solid waste generated by the water utility	Sydney Water suggest removing this indicator as it does not drive performance improvements. The quantity of waste generated is subject to the number and type of capital works projects that are delivered across the organisation year to year. Data will still be captured as part of E9.
E11	Total area of clearing of native vegetation	No suggested change to the indicators E11, E12 and E13. Further definition of what should be included under E12 and E13 due to rehabilitation, replanting and protection would be useful. Sydney Water owns and has plans of management for land that is not currently being captured under these indicators. To better reflect Sydney Water's land management practices, it is suggested areas weeded and rehabilitated are included in E12 and E13.
E12	Total area of native vegetation rehabilitated, including due to replanting and protection by the water utility.	
E13	Total area of native vegetation gain due to rehabilitation, replanting and protection by the water utility.	
E14	Total number and nature of proceedings or Penalty Notices of conditions under licences issued to the water utility by NOW for water management.	No suggested change.

Source: Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp11-13.

We sought feedback from the EPA and OEHL (the relevant NSW environment regulators) on Sydney Water's comments and our draft IPART performance indicators.

The EPA provided feedback on the environment performance indicators for wastewater overflows and waste. The EPA agrees with Sydney Water's position and suggested changes to the existing IPART environment indicator for sewage (wastewater)¹⁰⁵ overflows E6(S).¹⁰⁶ We accept the EPA's position on environment performance indicators for wastewater overflows.

The EPA does not agree with Sydney Water's positions regarding the existing biosolids and solid recyclable waste performance indicators.¹⁰⁷ The EPA considers that it is relevant for Sydney Water to report on the percent of solid waste recycled or reused expressed as a percentage of solid waste generated (existing performance indicator E9). In the EPA's view the existing indicator E10(S) should be maintained as it is a relevant indicator of generated waste. We understand this is because other industries report on waste in using these indicators, allowing comparison with other organisations.¹⁰⁸ We accept the EPA's position

¹⁰⁵ The existing indicators use the term sewage, we are updating to use the term wastewater.

¹⁰⁶ EPA, Email correspondence, 29 March 2018.

¹⁰⁷ EPA, Email correspondence, 29 March 2018.

¹⁰⁸ EPA, Email correspondence, 13 April 2018.

on appropriate environment performance indicators for waste. We acknowledge Sydney Water does not agree with the environment performance indicator E6 that we are implementing (existing indicator E9), and would prefer it was changed to report on the percent of recycled/reused of waste streams that can be recycled.¹⁰⁹

Following feedback from WaterNSW on the draft environment performance indicators,¹¹⁰ we have revised the biosolids and solid recyclable waste performance indicators to refer to “estimated total mass”. We have made clear in the definitions of these indicators that the water utility is required to use its best endeavours to estimate the total mass, and to document any assumptions it makes in determining the estimated total mass. The EPA has confirmed that it has no problem with the change to “estimated total mass”, since in estimating the total mass of waste, as Sydney Water will need to be clear about any assumptions it makes.¹¹¹

We are changing the existing energy consumption indicator (existing indicator E3 and E4). Currently these indicators separate the electricity consumption from water and sewer assets. Our changes will broaden the performance indicator from electricity consumption to energy consumption (electricity, fuel and gas), and apply it to the energy consumption of the entire water utility. This is aligned to the existing (and continuing) WaterNSW environment indicator for energy consumption and provides a consistent approach.

Sydney Water suggests that further definition of what should be included in the definition of native vegetation rehabilitation, replanting and protection would be useful (existing indicators E11, E12 and E13, which are equivalent to our amended indicators E8, E9 and E10).¹¹² These indicators are not currently capturing information where Sydney Water owns and has plans of management for land.¹¹³ To better reflect Sydney Water’s land management practices, Sydney Water suggested that areas “weeded and rehabilitated” are included in the definitions.¹¹⁴ We have not received feedback from the OEH or EPA on these indicators. However, we consider it is reasonable for the indicators to more accurately reflect Sydney Water’s land management practices, and therefore we have included areas that have been rehabilitated through weeding in the definitions for IPART performance indicators E12 and E13.

Other than from Sydney Water (see Table 7.1), we did not receive stakeholder responses to our Issues Paper or Draft Report regarding the existing Sydney Water environment indicators for energy consumption and native vegetation clearing. We consider that since these environment indicators have the support of Sydney Water¹¹⁵, we will continue to collect them at this time. We are reviewing the environment indicators again in our current Sydney Water operating licence review. We may make further changes to the environment indicators as a result of the licence review.

¹⁰⁹ Sydney Water Corporation, Submission on the review of water utility performance indicators and Reporting Manual, 24 May 2018, p4-5.

¹¹⁰ WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018.


¹¹¹ EPA, Email correspondence, 31 May 2018.

¹¹² Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp11-13.

¹¹³ Ibid, pp11-13.

¹¹⁴ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp11-13.

¹¹⁵ Ibid, pp11-13.



We considered the existing environment performance indicators E1, E2 and E14 which relate to the total number of proceedings and penalty notices under the *Protection of the Environment Operations Act 1997* and the *Water Management Act 2000*. This information is otherwise available from the relevant regulator (the EPA and Department of Industry – Water respectively).¹¹⁶ Therefore we will no longer collect performance indicators for Sydney Water’s compliance with other regulatory regimes.

Sydney Water proposed no change to existing performance indicator E7(S) which collects information on percent of trade waste customers in compliance with their wastewater discharge limits as outlined in their water utility trade waste agreements (see Table 7.1).¹¹⁷ However, we consider that this indicator represents an internal business indicator for Sydney Water, which does not provide any additional detail on the environment performance of Sydney Water. We will no longer collect performance indicators for the compliance of trade waste customers.

We provide a summary of our environment indicators for Sydney Water with stakeholder positions in Table 7.2.

¹¹⁶ Ibid, pp11-13.

¹¹⁷ Ibid, pp11-13.

Table 7.2 Summary of environment indicators for Sydney Water

Indicator number	Indicator	Comparison to existing Sydney Water environment indicators	Stakeholder feedback on existing indicator
E1	Total energy consumption by the utility (electricity, fuel and gas) in units provided on energy bills	Similar to existing indicator E3 and E4, which are split into water and sewer, and limited to electricity consumption	Sydney Water supported our change in its response to our Draft Report.
E2	Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption	Same as existing indicator E5	Sydney Water did not suggest any changes.
E3	Total number of Controlled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main	Change to indicator E6(S)	Proposed by Sydney Water, supported by the EPA.
E4	Total number of Uncontrolled Wastewater Overflows that occur in dry weather that discharged to the environment, per km of sewer main	Change to indicator E6(S)	Proposed by Sydney Water, supported by the EPA.
E5	Estimated total mass of biosolids produced by water utility	Similar to existing indicator E8	Sydney Water proposed removal. EPA supported making no change, and confirmed support for addition of "Estimated".
E6	Percent of solid waste Recycled or Reused expressed as a percentage of solid waste generated	Same as existing indicator E9	Sydney Water proposed change. EPA supported making no change.
E7	Estimated total mass of solid waste generated by the water utility	Similar to existing indicator E10(S)	Sydney Water proposed removal. EPA supported making no change, and confirmed support for addition of "Estimated".
E8	Total area of clearing of native vegetation	Same as existing indicator E11	Sydney Water did not suggest any changes.
E9	Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility	Similar to existing indicator E12	Proposed by Sydney Water.
E10	Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility	Similar to existing indicator E13	Proposed by Sydney Water.

Source: Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp11-13; EPA, Email correspondence, 29 March 2018; Sydney Water Corporation, Submission on the review of water utility performance indicators and Reporting Manual, 24 May 2018, p4-5; EPA, Email correspondence, 31 May 2018.

WaterNSW's obligations to report against environment performance indicators

WaterNSW's operating licence requires WaterNSW to:¹¹⁸

- ▼ monitor, record and compile data on environment indicators relevant to declared catchment areas (the environment indicators are set out in Appendix C of the Reporting Manual), and
- ▼ report on those indicators in accordance with its reporting manual.

WaterNSW currently reports on four IPART environment indicators for the declared catchment areas only.

In response to our Issues Paper, WaterNSW indicated that in some circumstances it is onerous for it to report on indicators relating solely to the Greater Sydney Catchment area¹¹⁹, as it collects data across its entire area of operations (ie, state-wide).¹²⁰ WaterNSW argues reporting on this limited data set is not only challenging and resource intensive, it is of limited value given the declared catchment area only captures a portion of WaterNSW's area of operations.¹²¹ WaterNSW recommends that it be required to report on the four IPART environment indicators cross its entire area of operations.¹²²

We considered WaterNSW's proposal and agree with its position that reporting on its environment performance across the entire area of operations may be a more accurate reflection of its environment performance as a water utility. However, as the operating licence only requires WaterNSW to compile environment indicators for declared catchment areas and not across its entire area of operations, and as there is no legislative requirement for WaterNSW to report on environment indicators for its entire area of operations, we do not require WaterNSW to report on environment performance indicators for areas outside the declared catchment areas. This is consistent with our approach for Hunter Water and WIC Act licensees that also do not have a legislative requirement to report on environment indicators.

Nevertheless, WaterNSW could report on its environment indicators across its entire area of operations, however this would be in addition to its reporting obligation for the declared catchment areas.

We are maintaining the number of environment performance indicators for WaterNSW

We are maintaining four environment performance indicators for WaterNSW. These are generally consistent with the existing environment performance indicators imposed on WaterNSW, with some changes to be consistent with Sydney Water. At the request of WaterNSW we are implementing a one-year transition period for its reporting on the new environment performance indicators.

¹¹⁸ *Water NSW Act 2014*, s 12(2)(b) requires Water NSW to compile indicators of the direct impact of its activities (including but not limited to the impact of energy that is used and the waste which is generated) on the environment so as to provide information about its performance and enable reports to be prepared; Water NSW Operating Licence 2017-2022 cl 2.3.1(b).

¹¹⁹ Currently the only Declared Catchment Area.

¹²⁰ WaterNSW, Submission to the IPART review of water utility performance indicators, March 2018, p4.

¹²¹ *Ibid*, p4.

¹²² *Ibid*, p4.

Decision

18 For 2018 only, WaterNSW must report on the existing IPART performance indicators for the environment, applicable to the Declared Catchment Areas only:

- E1 Total annual energy consumed by the water utility (electricity, fuel and gas) in units provided on energy bills
- E2 Green electricity consumption as a % of total electricity consumption by Water NSW
- E3 Estimated volume and type of waste annually sent to landfill from Water NSW's activities (kg per year)
- E4 Waste recycled or reused expressed as a percentage of total waste generated by Water NSW's activities, by type of waste

19 From 2019, WaterNSW must report on the following IPART performance indicators for the environment, applicable to the Declared Catchment Areas only:

- E1 Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills
- E2 Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption
- E6 Percent of solid waste recycled or reused expressed as a percentage of solid waste generated
- E7 Estimated total mass of solid waste generated by the water utility

As we do not use the information on WaterNSW's current environment performance indicators, so prior to releasing our Issues Paper, we did not have a strong view as to the most appropriate indicators that should be adopted. We sought stakeholder views on the most appropriate environment performance indicators for WaterNSW to report on.

In our Draft Report we proposed indicator E7 as "Total mass of solid waste generated by the water utility". WaterNSW noted that the definition of "total mass" that we included in its draft Reporting Manual referred to "biosolids captured and removed from sewage treatment plants", and that WaterNSW does not operate sewage treatment plants in the Declared Catchment Area. WaterNSW proposed removing the definition for "total mass".¹²³ We agree with this proposal.

Further, WaterNSW, noted that this indicator is difficult to measure accurately, particularly as it applies to only one section of WaterNSW's operations (the Declared Catchment Areas). To reduce the burden in collecting and reporting this information, WaterNSW proposed we use the wording "estimated total mass". We agree with this proposal, and have made clear in the definition that the water utility is required to use its best endeavours to estimate the total mass, and to document any assumptions it makes in determining the estimated total mass. As discussed previously, this approach will apply to both Sydney Water and WaterNSW. The EPA supports the waste indicators we have decided to apply to WaterNSW (E6 and E7), and has no concern with the change to "estimated total mass", since in estimating the total mass of waste, as Sydney Water and WaterNSW would need to be clear on any assumptions they make.¹²⁴

¹²³ WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018.

¹²⁴ EPA, Email correspondence, 31 May 2018.

In our Draft Report, we proposed changes to the existing green electricity consumption indicator (existing indicator E2). Our proposal changed the indicator to capture electricity consumed from renewable resources or generated by the water utility, rather than only the amount of “green electricity” consumed. We proposed this change to align with the existing (and continuing) Sydney Water environment indicator for renewable energy to provide a consistent approach.

WaterNSW noted that measuring the amount of renewable energy it generates may be difficult, particularly due to the presence of third-party pumped hydroelectricity projects on WaterNSW’s assets.¹²⁵ However, the environment performance indicator E2 is measuring the “*electricity consumption* from renewable resources or generated by the water utility expressed *as a total percentage of electricity consumption*”, that is, the focus is on the electricity consumed, not generated. There is no requirement on WaterNSW to determine the electricity generated by third-parties via WaterNSW’s assets.

WaterNSW proposes a transition time for reporting on the amended environment performance indicators, as it is concerned about its ability to collect the data to enable it to report on the amended environment performance indicators by 1 October 2018.¹²⁶ WaterNSW proposes that for the 2017-18 reporting year it reports on the existing environment performance indicators (by 1 October 2018), and for the 2018-19 reporting year it reports on the amended environment performance indicators (by 1 October 2019). We agree with WaterNSW’s proposal for a one-year transition period to provide it with enough time to enable the collection of the information required for the amended environment performance indicators.

¹²⁵ WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018.

¹²⁶ WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018.

8 Performance – Customers

This chapter discusses the customers performance area, which relates to water utilities' responsibilities toward their customers. This includes meeting certain standards of service and implementing appropriate processes, policies and protocols for managing or dealing with customers. It also relates to ensuring customers are satisfied with the overall performance of their water utility.

8.1 Customer service

The desired outcome for customer service is for water utilities to provide an appropriate level of service to its customers, and to ensure the protection of customers.

We will not require performance indicators for customer service

We assess customer service outcomes through regular monitoring and reporting as well as regular expert audit against licence requirements. There appears to be a limited need to use performance indicators to monitor performance of water utilities for customer service because:

- ▼ Water utilities are required to develop, implement and maintain a range of measures and mechanisms relating to their customers, including customer contracts, financial hardship and non-payment policies and procedures, complaints and dispute resolution procedures and provide information to the public.
- ▼ PWUs must be members of the Energy and Water Ombudsman of NSW,¹²⁷ and WIC Act licensees that supply water or provide sewerage services (or both) to small retail customers must be members of an approved ombudsman scheme.¹²⁸
- ▼ All water utilities are required to report on any non-compliance related to customer service obligations.
- ▼ Hunter Water and WaterNSW are also required to provide an annual compliance and performance report to IPART regarding their customer and stakeholder relations.¹²⁹
- ▼ Water utilities' performance in meeting customer service obligations is generally good.

Decision

- 20 Given that IPART assesses customer service outcomes through regular monitoring and reporting, IPART does not require water utilities to report on performance indicators on customer service.

¹²⁷ Hunter Water Operating Licence 2017-2022, cl. 5.6.1; Sydney Water Operating Licence 2015-2020 cl 5.7.1; Water NSW Operating Licence 2017-2022, cl 6.10.1.






¹²⁸ *Water Industry Competition Act 2006*, s 50.

¹²⁹ IPART, *Hunter Water Reporting Manual*, May 2017, cl 5.1 and IPART, *Water NSW Reporting Manual*, February 2018, cl 6.1.

We have assessed customer service performance indicators for Hunter Water and WIC Act licensees against the criteria in Figure 3.1. Our assessment of the criteria is set out in Figure 8.1.

Figure 8.1 Assessment of customer service performance indicators

► Customer service performance indicators

Criteria	Proposed Indicators
Is there a regulatory purpose for the performance indicator?	
Do the customer service performance indicators align with the desired outcome?	
Do the benefits of the information outweigh the costs of collecting the information?	
Is the information not currently collected through other means?	
Is the water quantity performance indicator consistent with SMART criteria ?	

Stakeholders generally agreed that customer service indicators are not required

We did not receive any feedback from stakeholders that are using the existing customer service indicators.

Hunter Water, Sydney Water, WaterNSW, Energy & Water Ombudsman NSW (EWON), and Public Interest Advocacy Centre (PIAC) support our view, and consider the existing customer service requirements and IPART's compliance monitoring framework allows us to adequately monitor water utilities' customer service performance.¹³⁰

In response to our Issues Paper, DPE put forward its view that it is prudent to maintain quantitative customer service performance indicators for all water utilities whilst qualitative measures of customer satisfaction are developed.¹³¹ DPE considers that this would allow the two approaches to be compared to make an evidence based decision on whether any particular approach better reflects customer satisfaction.¹³² DPE did not provide any information regarding whether it uses the existing quantitative customer service indicators. We discuss customer satisfaction performance indicators below. On balance however, we

¹³⁰ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p20; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, p15; WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018; EWON, Response to Water Utility Performance Indicators Review 2018, 24 May 2018; PIAC, Response to Water Utility Performance Indicators Review – Draft Report, 22 May 2018.

¹³¹ DPE, Submission on water utility performance indicators review, 9 March 2018, p2.

¹³² Ibid, p2.

consider that our compliance monitoring of water utilities' customer service performance is appropriate, notwithstanding the absence of qualitative measures of customer satisfaction. We intend to investigate further the design of qualitative performance indicators (see below).

8.2 Customer satisfaction

The vast majority of customers of the water utilities in NSW cannot change their provider if they are not satisfied with the service they receive. For this reason, there are customer service obligations in water utility licences.

We intend to review measurements of customer satisfaction in 2018-19

We intend to continue to investigate the potential for customer satisfaction indicators and engage with water utilities and other stakeholders on this matter throughout 2018-19.

We are interested in measuring customer satisfaction based on a customer survey. As we explained in our Issues Paper we do not currently have a preference for the design of a qualitative customer satisfaction performance indicator. We are aware that answers from customer surveys may pose issues where a statistically insignificant number of responses are collected. For some WIC Act licensees with very few customers, customer surveys may not be feasible. As part of our investigation, we would consider how customer service indicators could be best applied across the water utilities.

Decision

21 IPART intends to review customer satisfaction indicators for water utilities in 2018-19.

Stakeholders generally support investigating measurement of customer satisfaction

Hunter Water, Sydney Water, WaterNSW, DPE, Department of Industry – Water, PIAC, and EWON support our interest in using customer satisfaction surveys to collect customer satisfaction performance indicators.¹³³ However, there was also agreement that further investigation is required. Hunter Water, Sydney Water, WaterNSW and PIAC support our proposal to investigate customer satisfaction indicators in 2018-19, and expressed that they were looking forward to participating in that review.¹³⁴

NSW water utilities value and measure customer satisfaction

Water utilities currently undertake customer satisfaction surveys and increasingly consider customer satisfaction to be a driver for their business.

¹³³ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp24-31; Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p22; Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp15-16; Department of Planning and Environment, Submission on water utility performance indicators review, 9 March 2018, p2; EWON, Response to Water Utility Performance Indicators Review 2018, 24 May 2018; PIAC, Response to Water Utility Performance Indicators Review – Draft Report, 22 May 2018.

¹³⁴ Hunter Water, Water utility performance indicators, 24 May 2018; Sydney Water, Submission on the review of water utility performance indicators and Reporting Manual; WaterNSW, Response to Draft Report – Water Utilities Performance Indicators Review, 24 May 2018; PIAC, Water Utility Performance Indicators review – Draft Report, 22 May 2018.

The Department of Industry – Water, which regulates regional urban water utilities (local water utilities) does not measure customer satisfaction, however the local water utilities generally undertake customer satisfaction surveys every two to three years.¹³⁵

Customer satisfaction is a driver for Flow Systems.¹³⁶ Flow Systems is competing with PWUs, local water utilities and other WIC Act licensees for the water, recycled water and sewerage services market. When a developer is selecting the water utility for its development, a consideration is the impact of the water utility on the developer’s ability to sell property. Flow Systems is aware that its reputation regarding customer satisfaction could affect future business with a developer: “if word gets around that Flow [Systems]’ customers are not very happy...it affects our future business, so [customer satisfaction] is a big driver for us”.¹³⁷ Flow Systems measures customer satisfaction through customer service surveys, including seeking feedback where customers have had an interaction or experience with Flow Systems (eg, where there has been a service issue).¹³⁸

Hunter Water and Sydney Water seek to understand the impact of the ‘customer experience’ on their businesses, in particular through the way they interact with customers in addition to the services provided.¹³⁹

Under Hunter Water’s 2017+3 Strategy, Hunter Water is planning and/or undertaking a number of initiatives, such as trialling a new monthly telephone survey to better understand how Hunter Water is performing relative to community expectations.¹⁴⁰ Hunter Water has based its survey questions on those used by Victorian water utilities as part of their reporting to regulators.¹⁴¹

Customers are a focus of Sydney Water’s Corporate Strategy with one of its three corporate objectives “customer at the heart” capturing its intent to ensure the voice of customers drives its business.¹⁴² ¹⁴³ In measuring customer satisfaction, Sydney Water intends to use a mix of:¹⁴⁴

- ▼ Outbound ‘brand’ surveys, to capture perceptual indicators (ie, a brand level survey, targeting a representative sample of the target populations, most likely primarily online but potentially multi-channel to capture hard to reach populations.)
- ▼ ‘Touchpoint’ post interaction experiential surveys, to capture customer sentiment and experiential indicators relevant to and triggered by an interaction with Sydney Water – for example, an inbound call request for a fault to be remediated, or after a customer pays their bill.

¹³⁵ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp27.

¹³⁶ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp29.

¹³⁷ Ibid, p29.

¹³⁸ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp26.

¹³⁹ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp24-31.

¹⁴⁰ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p22; IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp24-31.

¹⁴¹ Ibid, p22.

¹⁴² Sydney Water’s three objectives in its Corporate Strategy are Customer at the heart, world class performance, and high performance culture. Sydney Water, *Sydney Water Summary Annual Report 2015-16*.

¹⁴³ We note the three objectives in Sydney Water’s Corporate Strategy are different to the objectives in the *Sydney Water Act 1994*, which relate to Sydney Water’s objectives to be a successful corporation, to protect the environment, and to protect public health (s21).

¹⁴⁴ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp15-16.

WaterNSW undertakes an annual survey which asks customers to rate WaterNSW on customer service, reputation and value for money.¹⁴⁵

Stakeholders do not have a preference for a particular measure or methodology

Stakeholders did not express a preference for applying a particular measure of customer satisfaction, or a particular methodology. Instead, stakeholders usefully provided recommendations for the scope, purpose, and approach of a review into customer satisfaction performance indicators. As well as highlighting areas that may need particular focus. We intend to consider this information as we further develop our approach and undertake our review in 2018-19.

Hunter Water proposes a scope for our investigation, which could include an assessment of jurisdictional approaches (both within and outside of the water sector) and current initiatives undertaken by NSW utilities. Hunter Water suggests our review could:¹⁴⁶

- ▼ clarify the purpose(s) of customer satisfaction indicators within the NSW regulatory context
- ▼ identify any significant differences in jurisdictional operational, business and regulatory environments that may be relevant to the design of their specific customer satisfaction performance indicators and their applicability within the NSW context
- ▼ quantify the administrative costs associated with different approaches
- ▼ examine any unintended consequences, both positive and negative, of approaches that have been implemented to date
- ▼ identify any clear evidence of benefits in terms of improved customer performance outcomes associated with the different approaches
- ▼ consider the pros and cons of linking customer satisfaction indicators to financial incentives and penalties, taking into account possible funding mechanisms and bill impacts, and
- ▼ identify preferred options for introducing or trialling recommended customer satisfaction performance indicators.

Sydney Water cautions that we ensure consistency across utilities if customer satisfaction indicators are to be used for comparison or benchmarking.¹⁴⁷ As discussed above, Flow Systems has a similar view.¹⁴⁸ Flow Systems indicated it was open to having a discussion on customer satisfaction indicators, noting that it would require a lot more discussion if benchmarking was intended, due to the relative scale of customers serviced by WIC Act licensees compared to PWUs.¹⁴⁹

PIAC provided feedback that it considers qualitative customer satisfaction surveys an appropriate indicator for water utilities as long as the survey is robust in its design, and

¹⁴⁵ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp25-26.

¹⁴⁶ Hunter Water Corporation, Response to Issues Paper, IPART review of water utility performance indicators, March 2018, p22.

¹⁴⁷ Sydney Water Corporation, Sydney Water submission to IPART Issues Paper, IPART review of water utility performance indicators, March 2018, pp15-16; IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp24-31.

¹⁴⁸ IPART Transcript, Stakeholder Roundtable, 20 March 2018, pp24-31.

¹⁴⁹ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p3; IPART Transcript, Stakeholder Roundtable, 20 March 2018, p26.

includes considerations of how we ask the questions, how we interpret answers and the quality of data that is collected.¹⁵⁰

DPE welcomes consideration of customer satisfaction in performance monitoring to drive more responsive performance provision.¹⁵¹

PIAC notes that when surveying consumers, we should have regard to understanding consumers and their biases. For example, if a customer does not understand the question, they are more likely to agree with the status quo.¹⁵²

We would investigate how to measure customer satisfaction when customer numbers are small or geographic areas overlap

Due to the relative scale of WIC Act licensees compared to PWUs, Flow Systems' view is that at this stage qualitative customer satisfaction surveys are not an appropriate way to collect customer satisfaction performance indicators for water utilities.¹⁵³ We intend to investigate how we could effectively measure customer satisfaction for WIC Act licensees in a way that the benefits outweighed the costs.

We understand that in some cases, water utilities operate in the same geographical area, for example WaterNSW operates across NSW in areas where other PWUs, WIC Act licensees and local water utilities also operate. WIC Act licensees also generally operate within the existing areas of operation of PWUs and local water utilities. WaterNSW noted that water utilities operating in the same geographical area can cause difficulties in assigning customer satisfaction responses to the correct utility.

¹⁵⁰ PIAC, Email correspondence, 5 April 2018.

¹⁵¹ DPE, Submission on water utility performance indicators review, 9 March 2018, p2.

¹⁵² PIAC, Email correspondence, 5 April 2018.

¹⁵³ Flow Systems, Submission to IPART review of water utility performance indicators, 13 March 2018, p3.

A IPART performance indicators – definitions

Table A.1 IPART performance indicators - definitions

Performance area	Indicator number	Indicator	Definition
Water quality	No indicators required. IPART will monitor water utility performance via compliance monitoring.		
Water quantity	W1	Percent of Customers who place a Non-complying Water Order whom Water NSW contact within one working day to rectify that order	Percent of Customers who place a Non-complying Water Order whom Water NSW contact within one working day to rectify that order, calculated as a percentage of all Non-complying Water Orders placed in the financial year.
	W2	Percent of Water Orders which are Delivered within one day of the scheduled day of Delivery	Percent of Water Orders which are Delivered within one day of the scheduled day of Delivery, calculated as a percentage of all complying Water Orders placed in the financial year.
	W3	Percent of complying Temporary Trades within the State in the financial year which are processed within five working days of Water NSW's receipt of a correct application and fee	Percent of complying Temporary Trades within the State in the financial year which are processed within five working days of Water NSW's receipt of a correct application and fee.
	W4	Percent of Interstate Temporary Trades (except to South Australia) in the financial year which are processed within 10 working days of Water NSW's receipt of a correct application and fee	Percent of Interstate Temporary Trades (except to South Australia) in the financial year which are processed within 10 working days of Water NSW's receipt of a correct application and fee.
	W5	Percent of Interstate Temporary Trades to South Australia in the financial year which are processed within 20 working days of Water NSW's receipt of a correct application and fee	Percent of Interstate Temporary Trades to South Australia in the financial year which are processed within 20 working days of Water NSW's receipt of a correct application and fee.
Assets	A1	Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours	Number of properties that experience an unplanned water interruption that lasts for more than five continuous hours in the financial year.
	A2	Number of properties that experience three or more unplanned water interruptions that each lasts for more than one hour	Number of properties that experience three or more water interruptions that each lasts for more than one hour in the financial year.
	A3 ^a	Total number of unplanned water interruptions – water supply	The total number of unplanned interruptions where customers are without potable water supply, during the reporting year (interruptions).
	A4 ^b	Average duration of unplanned water interruptions – water supply	The average duration for which a customer is without potable water, due to an unplanned supply interruption during the reporting year minutes (minutes).

	A5 ^c	Percent of priority 6 breaks/leaks in drinking water mains that the water utility responded to within 3 hours	Percent of priority 6 breaks/leaks in drinking water mains that the water utility responded to within 3 hours in the financial year.
	A6 ^d	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 6 hours	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 6 hours in the financial year.
	A7 ^e	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 24 hours	Percent of priority 5 breaks/leaks in drinking water mains that the water utility responded to within 24 hours in the financial year.
	A8 ^f	Percent of priority 4 breaks/leaks in drinking water mains that the water utility responded to within 5 days	Percent of priority 4 breaks/leaks in drinking water mains that the water utility responded to within 5 days in the financial year.
	A9	Percent of Water Orders rescheduled, are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay	Percent of Water Orders rescheduled, are rescheduled in consultation with an affected Customer within one working day of an expected water shortage, or other delivery delay, calculated as a percentage of all Water Orders rescheduled in the financial year due to an expected shortage or Delivery delay.
	A10	Number of properties that experience a water pressure failure	Number of properties that experience a water pressure failure in the financial year.
	A11	Number of properties (other than public properties) that experience an uncontrolled wastewater overflow in dry weather	Number of properties (other than public properties) that experience an uncontrolled wastewater overflow in dry weather in the financial year.
	A12	Number of properties (other than public properties) that experience three or more uncontrolled wastewater overflows in dry weather	Number of properties (other than public properties) that experience three or more uncontrolled wastewater overflows in dry weather in the financial year.
Environment	E1 ^g	Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills	Total energy consumption by the water utility (electricity, fuel and gas) in units provided on energy bills in the financial year.
	E2 ^h	Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption	Electricity consumption from renewable resources or generated by the water utility expressed as a total percentage of electricity consumption in the financial year.
	E3	Total number of controlled wastewater overflows that occur in dry weather that discharged to the environment, per km of	Total number of controlled sewage overflows that occur in dry weather that discharged to the environment, per km of sewer main in the financial year.

	sewer main		
E4	Total number of uncontrolled wastewater overflows that occur in dry weather that discharged to the environment, per km of sewer main	Total number of uncontrolled sewage overflows that occur in dry weather that discharged to the environment, per km of sewer main in the financial year.	
E5	Estimated total mass of biosolids produced by the water utility	Estimated total mass of biosolids produced by the water utility in the financial year.	
E6 ^j	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated in the financial year.	
E7	Estimated total mass of solid waste generated by the water utility	Estimated total mass of solid waste generated by the water utility in the financial year.	
E8 ^j	Total area of clearing of native vegetation	Total area of clearing of native vegetation by the water utility in the financial year.	
E9 ^k	Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility	Total area of native vegetation rehabilitated, including due to replanting, weeding and protection by the water utility in the financial year.	
E10 ^l	Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility	Total area of native vegetation gain due to rehabilitation, replanting, weeding and protection by the water utility in the financial year.	
Customers	No indicators required. IPART will monitor water utility performance via compliance monitoring.		

^a NWI indicator IC17

^b NWI indicator C15

^c Existing indicator I9 in Sydney Water Reporting Manual

^d Existing indicator I10 in Sydney Water Reporting Manual

^e Existing indicator I11 in Sydney Water Reporting Manual

^f Existing indicator I12 in Sydney Water Reporting Manual

^g Existing indicator E1 in Water NSW Reporting Manual

^h Existing indicator E5 in Sydney Water Reporting Manual

ⁱ Existing indicator E9 in Sydney Water Reporting Manual

^j Existing indicator E11 in Sydney Water Reporting Manual

^k Existing indicator E12 in Sydney Water Reporting Manual

^l Existing indicator E13 in Sydney Water Reporting Manual

B IPART licence data – definitions

Table B.1 Licence data - definitions

Data number	Licence data	Definition
L1 ^a	Total volume of water supplied (ML)	The total volume of drinking and non-potable water supplied by the utility, including for environmental flows and bulk water exports in the financial year.
L2 ^b	Total volume of non-potable water supplied (ML)	The total volume of non-potable water supplied by the utility during the reporting year, in megalitres (ML).
L3 ^c	Total volume of wastewater collected (ML)	The total volume of wastewater collected by the utility during the reporting year, in megalitres (ML).
L4 ^d	Connected residential properties – water supply (000s)	The number of connected residential properties receiving water supply services from the utility during the reporting year (properties 000s).
L5 ^e	Connected non-residential properties – water supply (000s)	The number of connected non-residential properties receiving water supply services from the utility during the reporting year (properties 000s).
L6	Connected residential properties – wastewater (000s)	The number of connected residential properties receiving wastewater services from the utility during the reporting year (properties 000s).
L7	Connected non-residential properties – wastewater (000s)	The number of connected non-residential properties receiving wastewater services from the utility during the reporting year (properties 000s).
L8 ^f	Connected residential properties – recycled water supply (000s)	The number of connected residential properties receiving recycled water services from the utility during the reporting year (properties 000s).
L9 ^g	Connected non-residential properties – recycled water supply (000s)	The number of connected non-residential properties receiving recycled water services from the utility during the reporting year (properties 000s).

^a Existing indicator WICA#18 in NOL and RSL Reporting Manuals

^b NWI indicator W26

^c NWI indicator W18

^d NWI indicator C2

^e NWI indicator C3

^f NWI indicator C6

^g NWI indicator C7

