IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of Metropolitan Public Water Utilities' Performance Indicators

Water — Compliance Report
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1 Executive Summary and Introduction

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) determines the set of supplementary performance indicators to be reported by Sydney Water and Hunter Water (IPART indicators). These IPART indicators supplement the national water indicators (NWIs) administered by National Water Commission, which the public water utilities must report on annually[1].

Over time, the suite of IPART indicators has been extended and amended to meet different regulatory objectives and priorities. As a result, we considered that a rationalisation of the indicator set was needed.

To this end we have undertaken a review of the IPART indicators that would consistently apply to Sydney Water, Hunter Water, and eventually Central Coast Water Corporation[2].

As a result of our review, we have decided to significantly reduce the number of IPART indicators for Sydney Water and Hunter Water (see Table 1.1). This is consistent with our move towards a more system-based approach to regulation which has reduced the need to rely on indicators to monitor infrastructure performance.

We consider that the revised list of supplementary indicators, together with NWIs and our annual operating audits, provide a comprehensive framework for the assessment of water utility performance in New South Wales.

The final IPART indicator sets are provided in Appendices C, D, E and F to this report. The list of all IPART indicators that were removed or revised forms Appendix G.

1 A complete list of NWI indicators is provided in Appendix A.

2 The Central Coast Water Corporation is a corporation owned by Gosford and Wyong Councils that will provide water and sewerage services to the NSW Central Coast. It is intended that the revised IPART indicators will be applied to the new Corporation when it is granted an operating licence (expected in 2015/16) and has appropriate monitoring and reporting systems in place.

Table 1.1 Number of IPART Indicators for Sydney Water and Hunter Water before and after the review

	NWI Indicators[a]	Former IPART Indicators for Sydney Water	Former IPART Indicators for Hunter Water	New IPART Indicators for Sydney Water after review	New IPART Indicators for Hunter Water after review
Water quality	7	1	1	1	
Infrastructure (Service Quality & System Performance)	11	22	19	8	8
Customer Service	19	26	14	14	12 (subject to review)
Environment	13	33	24	17 0	8 (subject to review)
Other Hunter Water indicators	Various	-	11		0

[a] NWI indicators are taken as given for future reporting and were not subject to review.

We involved our key stakeholders, including the utilities, the Office of Environment and Heritage (OEH) and NSW Health, closely in our review and in most cases have expressed support for the utilities adopting the revised IPART indicators.

The revised indicator sets became effective from 1 July 2012 and have been incorporated into both Sydney Water's and Hunter Water's reporting manuals.

As part of our review, we also considered the existing set of supplementary capital monitoring and output measures reported by these utilities and used by us in our pricing regulation. We found that these reporting arrangements are unique to each utility and that the current arrangements are adequate. Therefore, we have not recommended any changes to these measures.

1.1 Introduction

IPART, like other jurisdictional regulators, collects performance indicators from public water utilities. We collect indicators on:

- service quality and system performance (mainly infrastructure)
- the environment
- customer service.

We use these indicators primarily to:

- Analyse utility operations by reviewing performance trends in relevant areas. These data provide input to our licence reviews, operational audits and assist us to develop performance standard targets.
- Provide information to the public regarding utility operations. We consolidate these data, together with NWI indicators, and publish them in our annual Water Industry Performance Report.
- Provide data to other regulators (ie, Office of Environment and Heritage (OEH)) for their legislative reporting and auditing requirements.

Over time, the number of indicators has increased as we have sought to meet changing regulatory objectives and priorities. We considered that a rationalisation of IPART's indicators was needed and the process started as part of Sydney Water's end of term licensing review in 2009/10. We then decided that a broader review was required to develop a more focused indicator set that we could consistently apply to Sydney Water, Hunter Water, and eventually Central Coast Water Corporation.

Our broader review objectives were to:

- reduce the burden of regulation by minimising the reporting overlap with other regulators (OEH and NSW Health)
- remove obsolete indicators and duplication, both within IPART's indicator set and between IPART indicators and NWI indicators
- ensure that the remaining indicators are more diagnostic to support our decision-making about the effective assessment of the operation and key activities of utilities by IPART
- improve the consistency of indicators to allow comparison between utilities.

We also wanted to consider whether improvements could be made to the set of capital monitoring and output measures that we use to assess the performance when determining pricing. These output measures provide evidence that past expenditure for specific capital projects delivered levels of service defined in the Pricing Determination. This is discussed further in Chapter 7.

Finally, we also commenced work to review Sydney Catchment Authority's (SCA's) IPART indicators. However, this work was subsequently absorbed by the SCA's recent end of licence review which included recommendations about its performance indicators. As a result, SCA's new Reporting Manual now includes the revised IPART indicators. Similarly, IPART indicators reported by State Water are to be examined as part of its end of term review which commenced in July 2012.

1.2 Review Process

To assist us in this review we engaged specialist consultants (Water Futures for water quality, t-cAM for infrastructure, and i-ConneXX for environment). The consultants were engaged to provide advice, including on new or revised indicators, and to assist in the stakeholder sessions. We assessed customer service indicators in-house.

Our first step in the review was to consolidate all indicators that we currently use, those used by other regulators in other jurisdictions and some internal indicators used by the utilities themselves.

We then compared these indicators with the NWI indicator sets[3]. We held a 2-day workshop where the utilities and a range of stakeholders were invited including the utilities, government agencies, other regulators and non-government agencies (see Appendix B for a full list of invitees). The workshop was divided into sessions (water quality, infrastructure, environment and customer). Our specialist consultants presented and facilitated these sessions.

Following the workshop, we invited all stakeholders to submit comments on the material discussed at the workshop. We also held some one-to-one meetings with stakeholders including a meeting with the Total Environmental Centre (TEC) regarding the environmental indicators.

Next, we developed a proposed IPART indicator set and provided this to Sydney Water and Hunter Water on 14 June 2011 for further comment. At the request of the utilities and in response to resourcing issues within the utilities and the Tribunal, the project was put on hold between June 2011 and the first quarter of 2012.

We recommenced the project in February 2012 when we met with Sydney Water, Hunter Water and OEH to resolve all outstanding issues. This mainly involved discussion of:

- some indicators that OEH/ EPA wanted to retain in relation to Sydney Water's other legislative reporting requirements (for further details see Chapter 4 on environmental indicators)
- some indicators on native vegetation that TEC wanted retained
- the need to make indicator definitions for the 2 utilities consistent wherever possible.

The following chapters provide discussion on the key matters raised with stakeholders and how these matters have been resolved.

[3] Since utilities are required to report on NWI indicators under a national agreement administered by the National Water Commission, these indicators were taken as given and not subject to review.

1.3 Structure of report

This report presents and discusses the findings of our review of IPART indicators that apply to Sydney Water and Hunter Water.

- Chapters 2, 3, 4 and 5 present a summary of the review findings for water quality, infrastructure performance, environmental performance, and customer service respectively
- Chapter 6 presents a summary of our findings for a number of other Hunter Water IPART indicators that did not belong to the above categories.
- Chapter 7 discusses output measures that may be used in IPART's pricing determinations.
- Chapter 8 discusses how we have attempted to make the indicator definitions as consistent as possible to enable better comparison of utility performance.
- Finally, Chapter 9 sets out future action that we propose to undertake within the next 12 months to further improve the IPART indicator sets.
- Appendix A lists the current NWI indicators.
- Appendix B lists all invitees to the stakeholder workshop which was held in March 2011 to review current IPART indicators.
- Appendices C, D, E and F provide the water quality, infrastructure performance, environmental performance, and customer service indicators sets that have been retained.
- Appendix G lists all IPART indicators that were removed including the reasons for their deletion.

2 Water Quality

There are currently only a small number of water quality indicators - 7 NWI and 2 IPART indicators (currently used to supplement the NWI data). The NWI[4] provide a high level summary of past performance. Mature water utilities (including Sydney Water and Hunter Water) usually report full compliance.

As part of the review, we noted that there are no 'lead' indicators in the NWI or IPART indicator sets that provide insight into the quality of water that is likely to be provided in the future. Our water quality consultant therefore examined some potential lead water quality indicators based on concepts from US and New Zealand models. However, in our workshop, stakeholders expressed the view that utilities have already developed appropriate water quality management measures as part of their implementation of the Australian Drinking Water Guidelines (ADWG) and Australian Guidelines for Water Recycling (AGWR) frameworks. The utilities argued that introducing additional, more generic, water quality indicators would potentially conflict with the current system based approach outlined in ADWG and AGWR. NSW Health were also comfortable with the current arrangements.

As a consequence, we decided not to develop lead water quality indicators at this time. Instead, we considered whether the 2 water quality IPART indicators needed to be revised. These indicators deal with the following:

- chemical/physical compliance with key water quality parameters and microbiological compliance for E.Coli (Hunter Water)
- number of drinking water quality incidents requiring notification to NSW Health (Sydney Water).

NSW Health recommended that the existing Sydney Water indicator be removed since they preferred the indicator currently being applied to Hunter Water (see Appendix C). Further, NSW Health recommended that this indicator be varied slightly this financial year and applied to both utilities from 1 July 2013. Before applying this revised indicator to both utilities we will conduct a cost benefit analysis.

4 Which are not subject to review.

3 Infrastructure Performance

There are currently 11 NWI on infrastructure performance, and a varying number of IPART indicators (Sydney Water – 22, Hunter Water - 19) which are used to supplement the NWI data.

The NWI[5] either describe the assets being used (ie, number of treatment plants, length of water/sewage mains) or provide a high level summary of past performance (ie, number of water/ sewerage main breaks per 100km of main).

IPART's infrastructure indicators collect data in relation to planned and unplanned water interruptions, water pressure and sewer overflows.

The review identified that many of the current IPART indicators had little relevance to the utilities' current operational performance as they:

- duplicated NWI indicators
- related to utility sewer overflow reporting requirements which are regulated by the NSW Environment Protection Agency (EPA)
- were no longer relevant as they replicated new System Performance Standards in the utilities' operating licences[6].

As a result of our review, we have revised the IPART indicator set to only 8 indicators for both utilities (see Appendix D). This is a significant reduction in the number of indicators that we will collect. We consider that the asset management system approach specified in the operating licences, together with the analysis of NWI and IPART indicators, provide an effective framework to monitor asset management within the utilities. This decision is also consistent with broad stakeholder agreement expressed at the workshop regarding rationalisation of the IPART indicator sets.

5 Which are not subject to review.

6 These standards were reviewed for Sydney Water in 2008 and Hunter Water in 2009 and did not form part of this review.

4 Environmental Performance

There are currently 13 NWI on environmental performance, and a varying number of IPART indicators (Sydney Water – 33, Hunter Water - 24) which are used to supplement the NWI data. The NWI[7] provide data on greenhouse emissions, the level of sewage treatment and performance issues including sewer overflows per 100km of main.

IPART's existing environmental indicators collect data on areas including:

- water quality in catchment areas
- electricity consumption used by water/ sewerage infrastructure
- waste reuse/ recycling
- native vegetation management.

At the workshop, most stakeholders, including OEH, generally supported a rationalisation of IPART's environmental indicators to reduce the reporting burden on water utilities. This was on the basis that:

- Many of the indicators were already covered by NWI indicators.
- Sewage treatment plant effluent quality data was already separately reported to the EPA by the utilities through their Sewage Treatment System Licence reporting obligations. Much of this data is also publicly reported.
- A large number of the indicators related to sewer overflow reporting which is regulated by the EPA.

OEH's support for a rationalised set of IPART indicators was subject to the utilities continuing to collect sufficient information to ensure:

- adequate public reporting of high level environmental information to the community, noting that OEH does not aggregate environmental information on Sewage Treatment Systems (STS) or groups of STS discharging to oceans or inland waterways
- adequate support for other statutory processes, including the provision of data provided by Sydney Water which is used by OEH in relation to separate legislative reporting and auditing requirements.

7 Which are not subject to review.

At the workshop, it was agreed to remove a number of existing indicators relating to native vegetation. Subsequently, the Total Environment Centre (TEC) requested that these indicators be retained. Following further consultation with OEH and the utilities we decided to retain these indicators. However, other indicators[8] that the TEC wanted retained were not supported as the information sought was either already publicly available or it was considered too difficult for the utilities to accurately report.

We have removed one IPART indicator relating to total power consumption which was reported in IPART's 2010/11 NSW Water Utilities Performance Report. This indicator was not considered to be a valuable indicator of a utility's operational performance since this measure only related to a small component of the utilities operating costs and is not diagnostic. The information is also already included in the utilities' annual report to IPART which is provided for pricing purposes.

As a result of our review, we revised the number of IPART indicators to 17 for Sydney Water and 8 for Hunter Water. This was a significant reduction on the previous number of indicators collected (from around 33 indicators for Sydney Water and 24 for Hunter Water). These indicators are outlined in Appendix E.

When compared with Hunter Water, Sydney Water has an additional 9 IPART environmental indicators. This is because:

- OEH required the retention of 3 IPART indicators as it needs the information provided by Sydney Water for separate legislative reporting and auditing requirements specified within its enabling legislation.[9] No corresponding obligations apply to Hunter Water.
- Hunter Water currently lacks the necessary systems to collect the data to enable reporting against 6 IPART environmental indicators.[10]

In respect to the first dot point, we have requested that the OEH explore alternative mechanisms available to them to obtain this information directly from Sydney Water with a view to removing these IPART indicators from 1 July 2013.

In respect to the second dot point, we will undertake further work to determine whether Hunter Water could develop systems to collect this data from 1 July 2013. Any future reporting against these indicators by Hunter Water will be subject to a cost benefit analysis.

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8 These indicators relate to pollutant discharges and the levels of treatment provided at the utilities' sewage treatment plants, the different uses of recycled water, including environmental flow releases, and the extent to which recycled water may be substituted for potable water. The information provided by these indicators can, in most cases, be obtained or derived from NWI indicators, environmental protection licences issued by OEH and reports produced by the utilities that are publicly available.

9 This reporting is outside of Sydney Water's operating licence requirements and is administered by OEH. The indicators involved are E6(S) to E8(S) and are specified in Appendix E.

10 The indicators are E9 (S), E10 (S), and E13 (S) to E16 (S) in Appendix E.

5 Customer issues

IPART's customer indicators focus on complaint resolution, call centre responsiveness, payment plans, disconnection/ flow restrictions and payment assistance vouchers.

- In undertaking our review of our customer indicators, we examined customer complaints statistics on both Sydney Water and Hunter Water provided by the Energy and Water Ombudsman NSW (EWON). There were only a relatively small number of customer complaints reported annually suggesting that both utilities' customers are satisfied, by in large, with the services provided.
- Customer service indicators used by energy utilities, to determine whether or not they might be suitable for water utilities.
- Opportunities to introduce more useful measures of customer affordability. We added new indicators and amended some existing indicators.
- Opportunities to remove indicators, particularly where there was duplication of reporting by the utilities.

As a result of our review, we retained 14 IPART indicators for Sydney Water and 12 IPART indicators for Hunter Water[11] (see Appendix F). This was a reduction on the previous number of indicators collected (from 24 indicators for Sydney Water and 14 for Hunter Water).

We deleted a range of indicators because:

- there was an excessive level of customer complaint categories particularly since NWI indicators already provide a basic breakdown of complaint categories
- some indicators were no longer relevant as they replicated infrastructure System Performance Standards in the utilities' operating licences (see Chapter 3)
- some indicators were already covered by NWI indicators
- the information reported for some indicators is easily obtained from other organisations (ie, EWON and OEH).

[11] Hunter Water does not currently have systems in place to enable it to report against indicators C5 (S) and C6 (S) which will only apply to Sydney Water in 2012/13. Hunter Water will report against these indicators from 1 July 2013.

We also looked at introducing new customer hardship indicators based on similar indicators developed for energy utilities under the National Energy Customer Framework. The recent addition of obligations to address customer financial hardship issues in both Sydney Water's and Hunter Water's Operating Licences and Customer Contracts triggered the need to develop appropriate indicators in this area.

As Sydney Water and Hunter Water did not have established systems to capture the data required for the proposed hardship indicators and as there were still points to be clarified in the definitions and details of these indicators, it was agreed at the workshop that the proposed introduction of the new hardship indicators in 2012/13 should be deferred. PIAC (define?) and EWON supported the proposed delay.

We intend to undertake work within the next 12 months, in conjunction with EWON and PIAC, to develop new hardship indicators for implementation in 2013/14. Future reporting against these indicators by both Sydney Water and Hunter Water will be subject to a cost benefit analysis.

6 Other Hunter Water indicators

The current IPART indicator sets for Hunter Water include 12 indicators that do not fit into each of the preceding water quality, infrastructure performance, environmental performance or customer issues categories. These indicators deal with the use of recycled water, water consumption by various customer classes, water efficiency, water restrictions and the operating cost of water supplied.

We have removed these indicators as our analysis and the general consensus at the workshop was that some of these duplicated NWI indicators, while the rest were not indicative of operational performance. These 'other' indicators are included at the end of Appendix G.

Finally, in the next 12 months we will review whether any of the recently adopted catchment-based indicators for the Sydney Catchment Authority (SCA) can also be usefully applied to Hunter Water's bulk water supply activities. These include 2 water quality indicators and 5 catchment health indicators. As we have stated previously, reporting against any new indicators for Hunter Water will be subject to a cost benefit analysis.

7 Pricing Output Measures

Currently, for pricing regulation purposes we require all major water utilities to provide us with reports on their key outputs and their capital expenditure by project and/or program. The measures are specific to each utility and hence the data does not facilitate comparisons between utilities. In addition, all water utilities are required to provide further reports on their capital expenditure at the end of the pricing determination period (usually a 4-year period).

We request these measures to increase the transparency to us and to stakeholders about the services and outputs that a utility delivers in return for the prices that customers pay. This information can also inform decision-making when we set prices for the next determination period.

As part of this review, we considered introducing more generic expenditure and output indicators to enable better comparison between the utilities. However, the utilities and other stakeholders expressed concern that the proposed more generic output measures did not quantify utility performance.

Generally, the utilities and other stakeholders expressed strong support for continuing with the established systems of output and capital expenditure indicators (which were largely implemented in 2009) without change.

Given the degree of support for the current approach, we decided that the status quo should be maintained at this time.

8 Definitions

As well as rationalising the number of IPART indicators, we attempted to make the indicator definitions as consistent as possible to assist the comparison of utility performance.

In some cases this was not possible because:

- there are differences in operating licence obligations and customer contract requirements
- the utilities would need to make major changes to their systems and procedures if the definitions were amended
- the utilities were unable to reach agreement on the definitions in time to have them included with the indicators to be implemented on 1 July 2012.

We have therefore requested the utilities to liaise with each other further to resolve outstanding definitional anomalies, thereby promoting a more complete set of common indicators in the future.

9 Future Action

The review identified a number of actions that IPART needs to undertake within the next twelve months to further improve the revised indicator sets. These actions include:

- Developing a common water quality indicator for both utilities, as recommended by NSW Health. The indicator will be based on the current Hunter Water IPART indicator which was retained for this financial year (refer Chapter 2).
- Encouraging OEH to find alternative mechanisms available to it to collect data from Sydney Water for its legislative reporting/auditing requirements specified within its enabling legislation. This will obviate the need for 3 current (Sydney Water) IPART indicators which OEH currently relies on for relevant data (refer Chapter 3).
- Determining the feasibility of 6 new environmental indicators for Hunter Water consistent with indicators currently being applied to Sydney Water. Hunter Water currently lacks the necessary systems to collect the data to enable reporting against these indicators (refer Chapter 4).
- Further reviewing some new customer hardship indicators with the objective of including them in the reporting requirements for 2013/14 (refer Chapter 5).
- Determining whether new indicators that have been recently developed for the SCA should apply to Hunter Water in relation to its role as a bulk water supplier (refer Chapter 6).
- Further developing common definitions where possible (refer Chapter 8).
- Liaising with the Central Coast Water Authority to have the future adoption of the revised IPART indicator set included as part of the review to establish an operating licence for that utility.

We will undertake a cost benefit analysis of any new indicators we propose to introduce as part of this ongoing work.

We also intend to examine performance indicators reported by State Water as part of its end of term review which has recently commenced.

Appendices

A NWI Indicators

The performance indicator sets are grouped under the following headings:

- water resources
- asset data
- customers
- environment
- pricing
- finance
- public health.

Table A.1 NWI Water Resources Indicators

W1	Volume of water sourced from surface water (ML)
W2	Volume of water sourced from groundwater (ML)
W3	Volume of water sourced from desalination (ML)
W3.1	Volume of water sourced from desalination of marine water
W3.2	Volume of water sourced from desalination of groundwater
W3.3	Volume of water sourced from desalination of surface water such as dams, rivers or irrigation channels
W4	Volume of water sourced from recycling (ML)
W5	Volume of water received from bulk supplier (ML)
W5.1	Volume of potable water received from bulk supplier
W5.2	Volume of non-potable water received from bulk supplier
W6	Volume of bulk recycled water purchased (ML)
W7	Total sourced water (ML)
W8	Volume of water supplied – residential (ML)
W8.1	Volume of potable water supplied – residential
W8.2	Volume of non-potable water supplied – residential
W9	Volume of water supplied – Commercial, municipal and industrial (ML)
W9.1	Volume of potable water supplied – commercial, municipal and industrial (ML)
W9.2	Volume of non-potable water supplied – commercial, municipal and industrial (ML)
W10	Volume of water supplied – other (ML)
W10.1	Volume of potable water supplied – other
W10.2	Volume of non-potable water supplied – other
W10.3	Volume of water supplied – managed aquifer recharge
W10.4	Volume of water supplied – agricultural irrigation
W11	Total urban water supplied (ML)

W11.1	Total urban potable water supplied
W11.2	Total urban non-potable water supplied
W11.3	Total volume of potable water produced
W12	Average annual residential water supplied (kL/property)
W13	Volume of water supplied – Environmental (ML)
W14	Volume of bulk water exports (ML)
W14.1	Volume of potable bulk water exports
W14.2	Volume of non-potable bulk water exports
W15	Volume of bulk recycled water exports (ML)
W16	Volume of waste collected – Residential sewage, non-residential sewage and non-trade waste (ML)
W17	Volume of waste collected -trade waste (ML)
W18	Total sewage collected (ML)
W18.1	Volume of sewage supplied to other infrastructure operators
W18.2	Volume of sewage taken from other infrastructure operators
W18.3	Volume of sewage taken from sewer mining
W18.4	Volume of sewage measured at inlet to treatment works
W18.5	Volume of sewage treated effluent
W19	Sewage collected per property (kL/property)
W20	Volume of recycled water supplied - Residential (ML)
W21	Volume of recycled water supplied - Commercial, municipal and industrial (ML)
W22	Volume of recycled water supplied - Agricultural (ML)
W23	Volume of recycled water supplied - Environmental (ML)
W24	Volume of recycled water supplied - On-site (ML)
W25	Volume of recycled water supplied - Other (ML)
W25.1	Volume of recycled water supplied - managed aquifer recharge
W26	Total recycled water supplied (ML)

W27	Recycled water (percent of effluent recycled)
W28	Total volume of urban stormwater discharges from a stormwater discharge point
W28.1	Volume of urban stormwater supplied to other infrastructure operators
W28.2	Volume of urban stormwater
W28.3	Volume of urban stormwater supplied for managed aquifer recharge
W28.4	Volume of urban stormwater used
W29	Total volume of treated and untreated sewage discharges from a sewage discharge point

Table A.2 NWI Asset Indicators

A1	Number of water treatment plants providing full treatment
A2	Length of water mains (km)
A3	Properties served per km of water main (No./km)
A4	Number of sewage treatment plants (No.)
A5	Length of sewerage mains and channels (km)
A6	Properties served per km of sewer main (No./km)
A7	Number of recycled water treatment plans (No.)
A8	Water main breaks (No, per 100 km of water main)
A9	Infrastructure leakage index (ILI)
A10	Real losses (L/service connection/d)
A11	Real losses (kL/km water main/d)
A14	Sewerage mains breaks and chokes (No. per 100 km sewer main)
A15	Property connection sewer breaks and chokes (No. per 1000 properties)

Table A.3 NWI Customer Indicators

C1	Population receiving water supply services (000s)
C2	Connected Residential properties – water supply (000s)
C3	Connected Non-residential properties – water supply (000s)
C4	Total connected properties – water supply (000s)
C5	Population receiving sewage services (000s)
C6	Connected Residential properties – sewerage (000s)
C7	Connected Non-residential properties – sewerage (000s)
C8	Total connected properties – sewerage (000s)
C9	Water quality complaints (No. per 1000 properties)
C10	Water service complaints (No. per 1000 properties)
C11	Sewerage service complaints (No. per 1000 properties)
C12	Billing and account complaints – water and sewerage (no. per 1000 properties)
C13	Total water and sewerage complaints (no. per 1000 properties)
C14	Percentage of calls answered by an operator within 30 seconds (%)
C15	Average duration of an unplanned interruption- water (minutes)
C16	Average sewerage interruption (minutes)
C17	Average frequency of unplanned interruptions – water (No. per 1000 properties)
C18	Customers to which restrictions applied for non-payment of water bill (No. per 1000 properties)
C19	Customers to which legal actions applied for non-payment of water bill (No. per 1000 properties)

Table A.4 NWI Environmental Indicators

E1	Percent of sewage treated to a primary level (%)
E2	Percent of sewage treated to a secondary level (%)
E3	Percent of sewage treated to a tertiary or advanced level (%)
E4	Percent of sewage volume treated that was compliant (%)
E5	Number of sewage treatment plants compliant at all times (No.)
E6	Public disclosure of sewage treatment plant performance (yes/no)
E7	Compliance with environmental regulator – sewerage (yes/no)
E8	Percent of biosolids reused (%)
E9	Greenhouse gas emissions –Water (tonnes CO2-equivalents per 1000 properties)
E9.1	Greenhouse gas emissions – bulk utility water (tonnes CO2-equivalents per ML)
E10	Greenhouse gas emissions – Sewerage(tonnes CO2-equivalents per 1000 properties)
E10.1	Greenhouse gas emissions – bulk utility sewerage (tonnes CO2-equivalents per ML)
E11	Net greenhouse gas emissions –– Other (net tonnes CO2-equivalents per 1000 properties)
E11.1	Net greenhouse gas emissions – other – bulk utility (net tonnes CO2-equivalents per ML)
E12	Total net greenhouse gas emissions (net tonnes CO2-equivalents per 1000 properties)
E12.1	Total net greenhouse gas emissions – bulk utility (net tonnes CO2-equivalents per ML)
E13	Sewer overflows reported to the environmental regulator (No. per 100 km of main)

Table A.5 NWI Pricing Indicators

P1	Tariff structure – water (text)
P1.1	Free water allowance (kL) – water
P1.2	Fixed charge – water ($)
P1.3	Usage charge 1st step ($/kL)

P1.4	Usage charge 2nd step ($/kL)
P1.5	Usage charge 3rd step ($/kL)
P1.6	Usage charge 4th step ($/kL)
P1.7	Usage charge 5th step ($/kL)
P1.8	Usage charge 6th step ($/kL)
P1.9	Usage charge 7th step ($/kL)
P1.10	Usage charge 8th step ($/kL)
P1.11	Usage charge 9th step ($/kL)
P1.12	Special levies – water ($)
P1.13	Income from special levies retained by utility? – Water (yes/no)
P2	Annual bill based on 200kL/a –– Water ($)
P2.1	Average annual residential water supplied (kL/property)
P3	Typical residential bill – water ($)
P3.1	Number of meter readings per annum –– water (No.)
P3.2	Number of bills per annum –– water (No.)
P4	Tariff structure – sewerage (text)
P4.1	Fixed charge – sewerage ($)
P4.2	Usage charge – sewerage ($/kL)
P4.3	Special levies ($) – sewerage
P4.4	Income from special levies retained by utility? (yes/no) – Sewerage
P5	Annual bill based on 200 kL/a – Sewerage
P6	Typical residential bill – Sewerage
P6.1	Number of bills per annum – Sewerage
P7	Annual bill based on 200 kL/a (water & sewerage)
P8	Typical residential bill (water & sewerage)

Table A.6 NWI Finance Indicators

F1	Total revenue – Water ($000)
F2	Total revenue – Sewerage ($000)
F3	Total Income for whole of utility ($000)
F4	Residential revenue from usage charges –Water (%)
F5	Revenue per property for water supply services ($/property)
F5.1	Revenue for water supply services ($/ML) – Bulk utility
F6	Revenue per property for sewerage services ($/property)
F6.1	Revenue for sewerage services ($/ML) – Bulk utility
F7	Income per property for whole of utility ($/property)
F7.1	Income for whole of utility ($/ML) – Bulk utility
F8	Revenue from Community Service Obligations (%)
F9	Nominal written-down replacement cost of fixed water supply assets ($000s)
F10	Nominal written-down replacement cost of fixed sewerage assets ($000s)
F11	Operating cost – Water ($/property)
F11.1	Operating cost – Water ($/ML) – bulk utility
F12	Operating cost – Sewerage ($/property)
F12.1	Operating cost – sewerage ($/ML) – Bulk utility
F13	Combined operating cost – Water and sewerage ($/property)
F13.1	Combined operating cost – Water and sewerage ($/ML) – bulk utility
F14	Total water supply capital expenditure ($000s)
F15	Total sewerage capital expenditure ($000s)
F16	Total capital expenditure for water and sewerage ($000s)
F28	Water supply capital expenditure ($/property)

F28.1	Water supply capital expenditure ($/ML) – Bulk utility
F29	Sewerage capital expenditure ($/property)
F29.1	Sewerage capital expenditure ($/ML) – Bulk utility
F17	Economic real rate of return – Water
F18	Economic real rate of return – Sewerage
F19	Economic real rate of return – Water and sewerage
F20	Dividend ($000s)
F21	Dividend payout ratio (%)
F22	Net debt to equity (%)
F23	Interest cover
F24	Net profit after tax ($000s)
F25	Community service obligations ($000s)
F26	Capital works grants – Water ($000s)
F27	Capital works grants – Sewerage ($000s)
F30	NPAT Ratio (%)

Table A.7 NWI Health Indicators

H 1	Water quality guidelines
H 2	Number of zones where microbiological compliance was achieved (e.g., 23/24)
H 3	Percent of population where microbiological compliance was achieved
H 4	Number of zones where chemical compliance was achieved (e.g., 23/24)
H 5	Risk-based drinking water quality management plan externally assessed?
H 6	Risk-based drinking water quality management plan (Please specify plan in place e.g. ISO9001, HACCP, ADWG Aquality assessment)
H 7	Public disclosure of drinking water quality performance (yes/no)

B Invitees to Workshop 30-31 March 2011

- Sydney Water
- Hunter Water
- Sydney Catchment Authority
- Gosford City Council
- Wyong Shire Council
- Office of Environment and Heritage (the former DECCW)
- Office of Water
- NSW Health
- NSW Treasury
- Energy and Water Ombudsman of NSW (EWON)
- Public Interest Advocacy Centre (PIAC)
- Essential Service Commission of Victoria
- Economic Regulation Authority of Western Australia
- National Water Commission

The Total Environmental Centre did not attend the workshop but a subsequent one-to-one meeting with this organisation was held where proposed environment indicators were discussed.

C Revised IPART Water Quality Indicator

C.1 Revised IPART Water Quality Indicator

NWI Public Health (water quality) indicators include data for water quality compliance with the Australian Drinking Water Guidelines and provide information on how well a utility is managing its water treatment facilities and distribution system. The following IPART indicator is supplementary to the NWI indicators.

IPART Indicator No.	Indicator detail	IPART comments
WQ 1(H)	Microbiological compliance - Percentage of routine water quality samples that comply with the Australian Drinking Water Guidelines for E.Coli. Chemical/physical compliance - Percentage of routine water quality samples that comply with the Australian Drinking Water Guidelines for key chemical/physical parameters	Retained for 2012/ 13 on the recommendation of NSW Health. Work to be undertaken over the next 12 months to develop a common indicator based on this indicator which will then be applied to both utilities from 1 July 2013. This will be subject to a cost benefit analysis. (WQ-1 is the current HWC IPART OL DWQ-1 indicator)

D Revised IPART Infrastructure Indicators

NWI Infrastructure indicators for water and sewerage assets include data on water and sewer breaks, leakage, sewer overflows, stormwater and water quality and sewer interruptions. The following IPART indicators are supplementary to the NWI indicators.

IPART Indicator No.	**Indicator detail**	**IPART comments**
I 1	The number of properties affected by an unplanned water interruption duration of more than 1 hour and less than or equal to 5 hours.	This indicator provides supplementary information for the unplanned water interruption System Performance Standard. (Based on current SWC IPART C 2.2 indicator)
I 2	Occurrence of water interruptions to affected properties (i.e. the number of properties experiencing 3 or more Planned and Unplanned water interruptions) of more than one hour duration)	This indicator provides supplementary information for the unplanned multiple water interruption System Performance Standard. (Based on current HWC IPART OL WSR - 2 indicator)
I 3	Events leading to planned or unplanned water interruption where 250 or more properties experience an interruption of over 5hrs duration.	This indicator provides useful supplementary information about large impacts of unplanned interruptions. (Based on current HWC IPART OL WSR - 3 indicator)

Property means any real property to which either or both of the following conditions apply:

a. the real property is connected to the water utility's drinking water supply system, to the water utility's sewerage system or to the water utility's recycled water system and a charge for the services provided by one or more of those systems is levied on the owner of the real property;

b. the real property is within a declared stormwater drainage area for which the utility imposes a stormwater charge upon the owner of real property in that area.

Water Interruption means any event causing a total loss of water supply due to any cause. Water interruption excludes those caused by bursts or leaks in the service connection to internal plumbing or planned meter replacements. All interruptions not subject to notification caused by third parties or a power failure should be included. Exclude instances of reduced service levels due to, for example, low pressure. If a property experiences more than one interruption then it should be counted for each event. A water supply interruption, which causes loss of supply to 100 customers, is counted as 100 customer interruptions.

Planned water interruption – water interruption initiated by the water utility for which at least 24 hours notice has been given to the customer.

Unplanned water interruption means an interruption in which an occupier of a property has not received at least 24 hours notification of the interruption or an interruption that has occurred prior to the expiry of any notice provided to an occupier advising of an interruption. It also includes outages where the duration exceeds that originally notified. In this case the entire outage is classed as unplanned.

IPART Indicator No.	Indicator detail	IPART comments
I 4 (S)	The number of residential properties affected by planned water supply interruptions in peak hours (5am-9am and 5pm-11pm)	Different indicators have been adopted by Sydney Water and Hunter Water as the peak hours specified by Sydney Water differ to those adopted by Hunter Water, which are also included in its Customer Contract. This is an important customer service issue given that interruptions are planned (Both indicators based on current Victorian Essential Services Commission (ESC) indicator)
I 4 (H)	The number of residential properties affected by planned water supply interruptions in peak hours (5am -11pm)	
Property and Planned water interruption as defined for indicators I 1 to I 3. Notes: 1. For the purpose of this indicator, property refers to only residential properties. 2 .Interruptions spanning any part of the peak period are to be included.		
I 5	The number of properties in the utility's drinking water supply network experiencing a water pressure failure which is occasional or recurrent, but not permanent	This is an important infrastructure indicator relating to customer service. Separate versions of this indicator to apply to Sydney Water and Hunter Water because of different definitions of water supply failure adopted by the two water utilities in their respective Operating Licences. (Based on current SWC IPART C 6.1 indicator)
Sydney Water definition **Property** as defined for indicators I 1 to I 3. A property experiences a **water pressure failure** if a pressure of less than **15 metres** head is experienced for a continuous period of **15 minutes** or more measured at the point of connection of the Property and the water utility's water supply system, usually at the point of connection known as the "main tap". For the purpose of this indicator: (a) where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property. Connected properties currently unoccupied shall be included. (b) a Property is taken to have experienced a water pressure failure at each of the following times: (i) when a person notifies the water utility that the Property has experienced a water pressure failure and that water pressure failure is confirmed by the water utility; or (ii) when the water utility's systems identifies that the Property has experienced a water pressure failure; and (c) a Property will not be taken to have experienced a water pressure failure only because of a short term operational problem (such as a main break), which is		

IPART Indicator No.	Indicator detail	IPART comments
remedied within four days of its occurrence or from abnormal demand (such as demand during fire fighting). . **Hunter Water definition** **Property** as defined for indicators I 1 to I 3. A property experiences a **water pressure failure** if a pressure of less than **20 metres** head is experienced for a continuous period of **30 minutes** or more measured at the point of connection of the property to the water supply system (usually at the point of connection known as the 'main tap'), but does not include a situation in which the property experiences low water pressure on a day when peak day demand exceeds **370 megalitres per day** For the purpose of this indicator: (a) where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property. Connected properties currently unoccupied shall be included. (b) a Property is taken to have experienced a water pressure failure at each of the following times: (i) when a person notifies the water utility that the Property has experienced a water pressure failure and that water pressure failure is confirmed by the water utility; or (ii) when the water utility's systems identifies that the Property has experienced a water pressure failure; and (c) a property will not be taken to have experienced a water pressure failure if that water pressure failure occurred only because of: (i) a planned water interruption or unplanned water interruption; (ii) water usage by authorised fire authorities in the case of a fire; or a short term or temporary operational problem (such as a main break) which is remedied within 4 days of its occurrence **Occasional or recurrent, but not permanent water pressure failure** includes one off failure sites. Properties with a **permanent low water pressure failure** refers to properties that record a failure for every day of the year and is calculated through the water utility's Water Pressure Reporting Proforma		
I 6 (S)	Number of Priority 6 sewage overflows responded to in a year	These indicators only apply to Sydney Water. Separate versions of these indicators are to apply to Sydney Water and Hunter Water because of different priority ranking systems adopted by each water utility. While it was intended that a common system be adopted for both utilities, it was not possible to resolve this problem prior to completion of this review. These are good indicators for providing context for major overflow events. The original

<table>
<tr><th>IPART
Indicator No.</th><th>Indicator detail</th><th>IPART comments</th></tr>
<tr><td>I7 (S)</td><td>Number of Priority 5 sewage overflows responded to in a year</td><td>indicators were modified to require reporting of the number of overflow events responded to in a year rather than the time taken to respond to such events. This enables comparison of major sewer events in other years and provides a better understanding of the utility's performance in controlling sewage overflows.
(Based on current SWC IPART A3.1 and A3.2 indicators)</td></tr>
<tr><td colspan="3">Priority 6 sewage overflow is an event assessed by Sydney Water as
(a) a public health concern;
(b) likely to amount to significant damage to property,
(c) likely to have a significant environmental impact,
(d) an interruption of the sewerage service
Priority 5 sewage overflow is an event assessed by Sydney Water as likely to amount to:
(a) minor property damage;
(b) minor environmental impact (including unpleasant odours) not posing a significant health risk
Sydney Water has defined problem codes of 'sewerage surcharge', 'plumber confirmed choke', or 'internal surcharge'. The number of events to be used is the number recorded under these codes determined to be priority 6 or 5 jobs.</td></tr>
<tr><td>I 6 (H)</td><td>Number of Priority 1 sewage overflows responded to in a year</td><td rowspan="2">These indicators only apply to Hunter Water
Separate versions of these indicators are to apply to Sydney Water and Hunter Water because of different priority ranking systems adopted by each water utility. While it was intended that a common system be adopted for both utilities, it was not possible to resolve this problem prior to completion of this review.
These are good indicators for providing context for major overflow events. The original indicators were modified to require reporting of the number of overflow events responded to in a year rather than the time taken to respond to such events. This enables comparison of major sewer events in other years and provides a better understanding of the utility's performance in controlling sewage overflows.
(Based on current HWC IPART OL SSR – 3A and 3B indicators)</td></tr>
<tr><td>I 7 (H)</td><td>Number of Priority 2 sewage overflows responded to in a year</td></tr>
<tr><td colspan="3">Priority 1 sewage overflows refers to overflow events that result in or contribute to personal injury, disease or significant damage to the environment
Priority 2 sewage overflows refers to overflow events that result in minor damage to property or the environment while not posing a significant health risk.</td></tr>
</table>

IPART Indicator No.	Indicator detail	IPART comments
I 8	Number of residential customers' dwellings affected by sewer spills not contained within 1 hour of notification	This is an important infrastructure and customer service indicator. (Based on present Victorian ESC indicator)

Residential customer means a customer who: owns real property which is used as a principal place of residence.

Property as defined for indicators I 1 to I 3.

Sewer spills refers to a sewer spill caused by a fault in the water utility's sewerage system that discharges to a customer's dwelling. It does not include spills caused by faults in the service connection or house connection branch and the house service line.

Contained means the sewage spill has ceased or has been alleviated. It does not include sewer spills caused by faults or blockages in the customer's pipes

E Revised IPART Environment Indicators

E.1 Revised IPART Environmental Indicators

NWI Water Resources and Environmental indicators include data for sources of water and volume of water sourced, volume of water supplied and the use of such water, the use of recycled water and general environmental indicators. The following IPART indicators are supplementary to the NWI indicators.

IPART Indicator No.	Indicator detail	IPART comments
E 1	Total number of proceedings and Penalty Notices under the Protection of the Environment Operations (POEO)Act 1997 issued to the water utility	These are considered to be useful high level indicators. OEH has asked for the definition of this indicator to be aligned with the POEO Act provisions for proceedings and penalty notices (but not administration and other notices). The indicators partly overlap the NWI E5 and E6 indicators, however, they are more specific. (E 1 based on current SWC IPART E 2.3 and HWC OL BSI – 1 indicators) (E 2 based on current SWC IPART E 2.4 and HWC OL BSI – 2 indicators)
E 2	Total number of proceedings and Penalty Notices under the *Protection of the Environment Operations (POEO) Act 1997* issued to contractors engaged by the water utility.	

IPART Indicator No.	Indicator detail	IPART comments
Proceedings refers to proceedings in connection with the POEO Act for prescribed offences. **Penalty Notice** is a notice to the effect that, if the person served with the notice does not wish to have a specified penalty offence dealt with by a court, the person may pay the penalty prescribed under section 227 for the offence : **Note for E2** -this indicator refers to penalty notices which contractors inform the water utility were incurred whilst they were conducting works for the corporation. Each breach notice will be reported on the date that the contractor informed the water utility, not on the date the penalty was incurred or the date the notice was issued to the contractor.		
E 3	Total electricity consumption by water assets (kWh/ML of water supplied to be included).	Retained for general public interest. (E 3 based on current SWC IPART E 9.2 and HWC OL EC - 2 indicators) (E 4 based on current SWC IPART E 9.3 and HWC OL EC – 3 indicators) (E 5 based on current SWC IPART E 9.4 and HWC OL EC – 4 indicators)
E 4	Total electricity consumption by sewer assets (KWh/ML of sewage collected).	
E 5	Electricity consumption from renewable sources or generated by the water utility expressed as a percentage of total electricity consumption	
Water supplied is the total metered volume of water (potable or non-potable) supplied to customers over the reporting period plus estimated non-metered water supplied. This comprises the sum of residential water supplied, commercial, municipal and industrial water supplied and other water supplied (includes estimated non-metered water supplied). It Includes recycled water and urban stormwater used but excludes agricultural irrigation, environmental water and managed aquifer recharge. **Sewage treated** is the total volume of sewage collected by the utility, measured as treatment plant inflow, plus sewage treated by another business on behalf of the water utility e.g. wholesaler. This measure should equal the sum of volumes reported for residential, non-residential and non-trade waste collected and trade waste collected. **Renewable energy** is electricity sourced from non-fossil fuel sources.		
E 6 (S)	Total number of Controlled Sewage Overflows that occur in dry weather	These indicators only apply to Sydney Water. These indicators are to be retained for the time being at the request of OEH as the EPA uses the data collected for its annual review of Sydney Water's report on the

IPART Indicator No.	Indicator detail	IPART comments
E 7 (S)	Total volume of Controlled Sewage Overflows that occur in wet weather.	implementation of its Special Objectives. Moving forward, Sydney Water and OEH are to explore alternative mechanisms for the supply of required data to EPA, e.g. Sewage Treatment System licences and the OEH/ Sydney Water Memorandum of Understanding.
E 8 (S)	Total number of Controlled Sewage Overflows that occur in wet weather.	(E 6 (S) is the current SWC IPART E 3.2 indicator) (E 7 (S) is the current SWC IPART E 3.3 indicator) (E 8 (S) is the current SWC IPART E 3.4 indicator)
E 9 (S)	Total volume of Controlled Sewage Overflows that occur in dry weather, expressed as a percentage of total sewage effluent discharged to the environment.	This indicator only applies to Sydney Water as Hunter Water does not have specific equipment for monitoring the very few dry weather overflows from its wastewater systems. Overflows are important issues to customers. This indicator provides context for the analysis of overflows. This information is not easily obtained elsewhere. The inclusion of this indicator will be reviewed with indicators E 6 to E 8 with a view to it also being applied to Hunter Water from 1 July 2013. (E 9(S) is the current SWC IPART E 3.5 indicator)

Controlled Sewage Overflow is a Sewage Overflow that is directed by Sydney Water via a designed structure to a predetermined location such as a stormwater system or waterway in order to prevent overloaded or blocked sewers from discharging at sensitive locations, on private property or within buildings thus endangering public health or causing a public nuisance

Sewage means untreated liquid waste received in the reticulation system (includes the wastewater from homes, offices, shops, factories and other premises discharged to the sewer).

Sewage overflow – the discharge of untreated, diluted or partially treated sewage from the sewerage system which may occur in dry weather or in wet weather.

Dry weather overflow means where a sewer overflow has been caused by an identified blockage in the utility's sewerage system (eg, tree root intrusion) or a system failure not related to capacity (eg pumping station failure). It is a sewage overflow occurring when there is dry weather flow in the sewer, as determined by Sydney Water's hydraulic sewer system model

Wet weather overflow means where a sewage overflow is NOT the result of an identified blockage in the utility's sewerage system or a system failure. In these instances the overflow event is the result of failure in system capacity. It is a sewage overflow caused by rainfall induced wet weather flow, as determined by Sydney Water's hydraulic sewer system model. Wet weather overflow volume and events will be measured by the hydraulic sewer system models as specified in Sewage Treatment System (STS) Licences.

Effluent means sewage that has received all of the designed treatment processes at the water utility's sewage treatment plant.

IPART Indicator No.	Indicator detail	IPART comments
For this indicator, **total sewage effluent discharged to the environment** is inclusive of wet weather flows. **Note:** Indicator E 9 (S) is calculated as follows: Total Volume of all overflows from controlled structures as % = [Total Volume of all overflows from controlled structures]/[Total volume (treated effluent + overflows from control structures networks)]		
E 10 (S)	Percentage of trade waste customers in compliance with their wastewater discharge limits as outlined in their water utility trade waste agreements.	This indicator only applies to Sydney Water as Hunter Water does not have systems in place to monitor and report on this indicator by 1 July 2012. Hunter Water has estimated the cost to upgrade its IT system to enable this to be between $10, 000 and $20, 000. A cost/ benefit analysis will be undertaken within the next 12 months to assess whether reporting against this indicator is appropriate. The current Sydney Water indicator was modified as it is considered that the revised wording provides a better indication of compliance with utility trade waste agreements. (Based on current SWC IPART E 7 indicators)
Trade Waste is any waste water generated from or as a result of an industrial or commercial activity undertaken, other than at domestic or household premises. **Note:** For the purpose of this indicator, customers refers to industrial customers only, and not commercial customers. **Trade Waste agreement** means a written contract authorising discharge of trade wastewater to the water utility's sewerage system and requiring compliance with set terms and conditions.		
E 11	Total mass of biosolids produced by the water utility	Retained on recommendation of OEH that indicator provides context. It will not increase utility reporting burden as data collected is required for reporting on related NWI E8 indicator. (Based on current SWC IPART E 5 indicator)
Biosolids means the stabilised organic solids derived from sewage treatment processes. **Total Mass** means the quantity in dry tonnes of biosolids captured and removed from sewage treatment plants.		
E 12	Percent of solid waste recycled or reused expressed as a percentage of solid waste generated	Sydney Water indicator preferred to equivalent Hunter Water indicator HWC OL WM – 2. Does not duplicate similar NWI E8 indicator: "Percent of biosolids reused". (Based on current SWC IPART E 8.2 and HWC OL WM – 2 indicators)

IPART Indicator No.	Indicator detail	IPART comments
Solid Waste is any solid substance that is discarded, rejected, unwanted, in surplus or abandoned. It does not include gas, energy, water, wastewater, biosolids diverted for beneficial reuse and reuse water. **Recycled** means the conversion of waste materials into a usable product or resource. The process of recycling includes the diversion or extraction of the material from the waste stream; the collection and sorting of recyclable materials; and the processing of those materials into products which can then be used (or sold for use). Materials are deemed to have been recycled when they are transferred to a facility for processing or manufacturing (eg a recycling centre). Energy recovery (or waste-to-energy) is another form of recycling, which involves recovery of latent energy rather than a physical resource. **Re-use** is the application of a diverted waste product to a subsequent use which may be the same or different from the original purpose and which extends the life of the product, but without further manufacture. Beneficial re-use is generally taken to mean that the form of re-use delivers some benefit (economic, social or environmental).		
E 13 (S)	Total mass of solid waste generated by the water utility	This indicator only applies to Sydney Water as Hunter Water does not have the systems in place to enable it to collect data to report on this indicator by 1 July 2012. Retained on recommendation of OEH that indicator provides context. It will not increase utility reporting burden as data collected is required for reporting on related SWC IPART E 6 indicator. A cost/ benefit analysis will be undertaken to determine whether Hunter Water should report on this indicator from 1July 2013. (Based on current SWC IPART E 8.1 and HWC OL WM – 1 indicators)
Solid waste as defined for E 12.		
E 14 (S))	Total area of clearing of native vegetation.	These indicators only apply to Sydney Water. Retained at request of OEH as it uses data collected for SWC Special Objective Reporting. Also, as the NSW Monitoring, Evaluation and Reporting (MER) Strategy is looking to include this type of indicator, OEH recommends that that all 3 indicators should be retained until this review is completed. TEC supported the retention of these indicators. These indicators will be applied to Hunter Water when the MER strategy is implemented and its outcomes known, thereby enabling Hunter Water to develop a suitable reporting system. It is anticipated that this will occur from 1 July 2013. (E 14 (S) is the current SWC IPART E 11.1 indicator) (E 15 (S) is the current SWC IPART E 11.2 indicator) (E 16 (S) is the current SWC IPART E 11.3 indicator)
E 15 (S)	Total area of native vegetation rehabilitated.	
E 16 (S)	Total area of native vegetation gain due to rehabilitation, replanting and protection by Sydney Water.	

IPART Indicator No.	Indicator detail	IPART comments
Native vegetation indicators will be an estimate based on the production of Sydney Water Environmental Management Plans and documents, or triggered by Flora and Fauna studies. It will only be reported above 0.01 Hectares. The definition of Native Vegetation will be derived from the Native Vegetation Act 2003 (NV Act). The Objects of the NV Act provide guidance as to what needs to be considered when assessing whether an area will be included in the vegetation loss figures. Note: Indicator will include works undertaken by or on behalf of the water utility on land that is not owned by the water utility, such as offsetting impacts to one area by rehabilitation or replanting at another site.		
E 17	Total number and nature of proceedings or Penalty Notices of conditions under licences issued to the water utility by NOW for water management	Useful indicator to demonstrate compliance with NOW licences. (E 17 is the current HWC IPART OL WML - 1 indicator)
Proceedings refers to proceedings in connection with the Water Management Act for prescribed offences. **Penalty notice** means a notice to the effect that, if the person served with the notice does not wish to have an alleged offence dealt with by a court, the person may pay, in accordance with the notice, the penalty specified in the notice. **NOW** means the NSW Office of Water.		

F Revised Customer Indicators

F.1 Revised IPART Customer Indicators

The following indicators are supplementary to the NWI customers indicators for complaints, complaint resolution, call centre responsiveness, metering/billing based on estimates, payment or instalment plans, payment assistance vouchers, disconnection and flow restrictions.

IPART Indicator No.	Indicator detail	IPART comments
C 1	The percentage of complaints resolved within 10 business days	New indicator proposed by IPART that aggregates several indicators. 10 business days is considered a reasonable time frame for resolution of most complaints. Significant levels of complaints being resolved outside this timeframe may indicate some problems with the utility's complaints resolution process. (New Indicator)
Complaint is defined in AS ISO 10002-2006 or the most recent up-date of that standard. This AS ISO defines a complaint as an expression of dissatisfaction made to an organisation, related to its products, or the complaints-handling process itself, where a response or resolution is explicitly or implicitly expected. The following examples are intended to provide some clarity to this definition. - A contact requesting information is not a complaint - A contact reporting a service difficulty or fault is not a complaint and these contacts are recorded separately - A contact expressing dissatisfaction with repeat service difficulties and faults is a complaint - A contact where a credit adjustment on the account has been made due to a meter misread is a complaint - A contact that results in a water quality issue is a complaint (i.e., due to particles, discolouration, smell, taste, or a health issue) - A contact that results from an internal sewage overflow is a complaint - Any Civil actions taken through a court for loss or damage arising from the water utility's performance under the Customer Contract is a complaint - Complaints regarding repeat service difficulties or faults where they are from separate customers arising from the same cause, are counted as separate complaints - More than one complaint from the same customer arising from the same cause are reported separately - A complaint that is registered with EWON is a corporation complaint - A contact regarding a matter that is not the responsibility of the Corporation is not recorded as a complaint - A contact regarding flooding the water utility's Stormwater is considered to be a complaint.		

IPART Indicator No.	Indicator detail	IPART comments
Confirmed Low Water Pressure customer complaint means a complaint where there is known gauged data for a customer's complaint property at the same time and day as the customer contact. **Unconfirmed Low Water Pressure** customer complaint means all low water pressure customer complaints that are not confirmed customer complaints. **Property** as defined for indicators I 1 to I 3. **Resolution** of a complaint means that: (a) the complaint is resolved to a customer's satisfaction; or (b) the customer is provided with an explanation as to why no further action is proposed in relation to the complaint; or (c) the customer is provided with a date when the issue will be resolved if the complaint is relating to future planned operational or capital works.		
C 2	Percent of calls abandoned	This is a useful indicator of the quality of a utility's telephone services. (C 2 is the current HWC OL CS - 2 indicator)
C 3	Percent of metered accounts of customers that receive a bill not based on a business meter read for one year.	If customers are not receiving a bill based on a business meter read at least once per annum there is scope for over or undercharging to become a problem. (New Indicator)
Customer means any person who is taken to have entered into a Customer Contract with the water utility A **metered account** refers to water usage metered account, which is billed based on volume. If a property has multiple meters and each metered account receives a separate bill based on a meter read, these should be reported as separate metered accounts for the purposes of this indicator. If a property has multiple meters and a single account is issued due to common ownership, the meters will also be treated as separate metered accounts for the purposes of this indicator. A **customer meter read** is one, which is provided by the customer to the utility A **business meter read** is one taken by the utility or its contractor An **actual meter read** is one taken by the water utility or its contractor or the customer (i.e. includes both a customer meter read and a business meter read)		
C 4	Number per 1000 properties of contacts received by water utility that are requests for instalment or deferred payment plans	This indicator has been retained as it is considered to be a useful measure of affordability (Current SWC IPART C19.2 indicator)

IPART Indicator No.	Indicator detail	IPART comments
C 5 (S))	The total number of residential customers with continuing instalment plans with durations greater than 3 months.	This indicator will apply only to Sydney Water for the next 12 months as Hunter Water advised that it wasn't confident that it would have systems in place to report on these indicators by 1 July 2012. It is intended that the applicability of these indicators to Hunter Water in the next financial year will be reviewed as part of the broader review of proposed new Hardship Indicators. This indicator has been retained as it is considered to be a useful measure of affordability. (C 5(S)) is the current SWC IPARTC19.3 indicator) (C 6(S) is the current SWC IPART C 19.4 indicator)
C 6 (S)	The total number of non-residential customers with continuing instalment plans with durations greater than 3 months.	
C 7	Percent of residential customers on instalment plans	This indicator has been introduced as it is considered to be a useful measure of affordability. (Current VIC ESC indicator)
C 8	Percent of non-residential customers on instalment plans	This indicator has been introduced as it is considered to be a useful measure of affordability. (Current VIC ESC indicator)
Property as defined for indicators I 1 to I 3. **Instalment Plan** is a mutual agreement, which results in an outstanding debt being paid in full by a given date through a schedule of regular payments. **Deferred payment plan** refers to an arrangement between customers and the water utility for the deferred payment of outstanding service charges. **Residential customer** means a customer who: owns real property which is used as a principal place of residence. **Non-Residential customer** means all properties not classified as a residential customer.		
C 9	Number of customers receiving payment assistance vouchers or payment assistance scheme credits.	These indicators have been retained as they are considered to be useful measures of affordability until new customer hardship/ affordability measures are developed in consultation with the utilities, EWON and PIAC. The review of the new customer hardship indicators will be undertaken within the next 12 months.

IPART Indicator No.	Indicator detail	IPART comments
C 10	Value of payment assistance vouchers or payment assistance scheme credits provided to customers	Sydney Water no longer uses a voucher system for payment assistance and instead issues electronic payment assistance scheme credits on customers' accounts. (C 9 is based on the current SWC IPARTC 20.1 indicator) (C 10 is based on the current SWC IPART C 20.2 indicator)
Payment assistance vouchers are accountable documents handled through designated charity organisation to provide assistance to hardship-affected customers. A **payment assistance credit** is a specified dollar value of emergency assistance allocated to the customers' account when they are unable to pay their water bill due to a financial crisis.		
C 11	The total number of residential customers disconnected for non-payment of amounts owed to the utility.	These indicators have been retained as they are considered to be useful measures of affordability in the residential and non-residential areas. (C 11 is based on the current IPART SWC C 21.1 indicator) (C 12 is based on the current IPART SWC C 21.2 indicator) (C13 is the current IPART SWC C 23.1 indicator) (C 14 is the current IPART SWC C 23. 2 indicator)
C 12	The total number of non-residential customers disconnected for non-payment of amounts owed to the utility.	
C 13	Total number of residential customers on whom water flow restrictions have been imposed	
C 14	Total number of non-residential customers on whom water flow restrictions have been imposed	
Residential customer and Non-Residential customer definitions as defined for indicators C 5(S), C 6(S), C7 and C88. **Disconnection** means the stopping (either temporarily or permanently) of water supply to a customer's property. **Flow Restriction** means a direct intervention in the water supply system by the water utility in order to reduce flow to a customer's property		

G Removed or revised IPART indicators

G.1 Removed or revised IPART indicators

SYDNEY WATER		
Reference	**Indicator**	**Comment**
Public Health indicator		
IPART H 1	Number of drinking water quality incidents for which Sydney Water was required to be notified to NSW Health	Removed on the recommendation of NSW Health. Work to be undertaken over the next 12 months to develop a common indicator based on the current Hunter Water (public health) indicator OL DWQ-1 which will then be applied to both utilities from 1 July 2013. This will be subject to a cost benefit analysis.
Infrastructure indicators		
IPART A 1.1	Number of sewage overflow events affecting public properties occurring in dry weather	Discharges to public properties are already covered by OEH Sewage Treatment System licences.
IPART A 1.2	Number of sewage overflow events affecting other than public properties occurring in dry weather	Superseded by Sydney Water's sewage overflow System Performance Standard: No more than 14,000 properties (other than public properties) experience an uncontrolled sewerage overflows in dry weather in a financial year
IPART A 2.1	Number of sewage overflow events affecting public properties occurring in wet weather	Discharges to public properties are already covered by OEH Sewage Treatment System licences
IPART A 2.2	Number of sewage overflow events affecting other than public properties occurring in wet weather	Superseded by Sydney Water's sewage overflow System Performance Standard: No more than 14,000 properties (other than public properties) experience an uncontrolled sewerage overflows in dry weather in a financial year
IPART A 3.1	Number of Priority 6 sewage overflow events where response time was less than one hour	Retained in modified form as indicator I 6(S): Number of Priority 6 sewage overflows responded to in a year.
IPART A 3.2	Number of Priority 6 sewage overflow events where response time was more than one hour	

SYDNEY WATER		
Reference	**Indicator**	**Comment**
IPART A 4.1	Number of Priority 5 sewage overflow events where response time was less than three hours	Retained in modified form as indicator I 7(S): Number of Priority 5 sewage overflows responded to in a year.
IPART A 4.2	Number of Priority 5 sewage overflow events where response time was more than three hours	
IPART A 5	Length of stormwater drains and channels maintained (km)	Reported to IPART in the Annual Information Returns for pricing purposes. Considered a utility internal business priority.
IPART H 1	Number of drinking water quality incidents for which Sydney Water was required to notify NSW Health	Controlled by NSW Health which is responsible for drinking water quality.
IPART C 1	The total number of properties affected by Planned Interruptions	Duplicates NWI indicator.
IPART C 2.1	The number of properties affected by unplanned Interruption duration less than or equal to 1 hour	Not considered a useful indicator. Modified IPART C 2.2 is considered a more useful indicator of utility performance.
IPART C 2.2	The number of properties affected by unplanned Interruption duration more than 1 hour and less than or equal to 5 hours	Retained in modified form as indicator I 1.
IPART C 3	The number of Properties which experience 2 Unplanned Water Interruptions	Overall interruption time is considered more critical.
IPART C 4	Average time taken to respond to water main breaks	
IPART C 5	Average frequency of unplanned interruption – sewerage	Not considered a useful indictor– somewhat meaningless.
IPART C 6.1	The number of Properties experiencing a water pressure failure which is: occasional or recurrent, but not permanent	Retained in modified form as recommended indicator I 5.
IPART C 6.2	The number of Properties experiencing a water pressure failure which is: permanent	IPART C 6.1 (as modified to become indicator I 5) is considered a better and more critical indicator
IPART C 7.1	The number of Properties experiencing more than one water pressure failure	
IPART C 7.2	The number of Properties experiencing more than one water pressure failure as % of all properties supplied with water.	
IPART C 8	Average number of private properties experiencing sewage overflow	Not considered a very meaningful indicator of utility performance

SYDNEY WATER		
Reference	**Indicator**	**Comment**
IPART C 9	Number of private properties experiencing 2 sewer overflows in dry weather in the year	Replaced by Sydney Water's sewage overflow System Performance Standard: No more than 175 properties (other than public properties) experience 3 or more uncontrolled sewerage overflows in dry weather in a financial year.
IPART W 1	Total sewage effluent volume discharged to the environment from inland and ocean STPs	Covered by OEH Sewage Treatment System licences.
Environmental indicators		
IPART E 1.1	Total mass of phosphorus discharged to streams / rivers from inland STPs	Covered by OEH Sewage Treatment System licences.
IPART E 1.2	Total mass of nitrogen discharged to streams / rivers from inland STPs	
IPART E 1.3	Suspended solids capture rate for inland STPs	
IPART E 1.4	Total mass of suspended solids discharged from ocean STPs	
IPART E 1.5	Total mass of grease discharged from ocean STPs	
IPART E 1.6	Suspended solids capture rate for ocean STPs	
IPART E 2.1	Total number of breaches of environmental impact conditions under sewage treatment systems licences issued by DECCW	
IPART E 2.2	Total number of breaches of environmental impact conditions under water treatment systems licences issued by DECCW	
IPART E 2.3	Total number of prosecutions and Notices (including Penalty Notices) under the Protection of the Environmental Operations Act 1997 issued to Sydney Water	Retained in modified form - see E 1 and E 2
IPART E 2.4	Total number of prosecutions and Notices (including Penalty Notices) under the Protection of the Environmental Operations Act 1997 issued to contractors engaged by Sydney Water	
IPART E 3.1	Total volume of Controlled Sewage Overflows that occur in dry weather	Retained in modified form - see E 9(S)
IPART E 3.6	Total volume of Controlled Sewage Overflows that occur in wet weather, expressed as a percentage of total sewage effluent discharged to the environment	Difficult to measure volume of controlled sewage overflows , especially in wet weather
IPART E 3.7	Total number of breaches of conditions relating to environmental impacts under licences issued by DECCW for overflows to waterways	Covered by OEH Sewage Treatment System licences
IPART E 4	Percentage of beaches falling within the very good and good categories under the NHMRC	Captured by OEH.

SYDNEY WATER		
Reference	**Indicator**	**Comment**
	Guidelines for managing risks in recreational waters	
IPART E 5	Total mass of biosolids produced by Sydney Water	Retained in modified form as indicator E 11. Costs and mass biosolids information reported to IPART in the Annual Information Returns for pricing purposes.
IPART E 6.1	Total mass of water treatment residuals produced by Sydney Water	NWI E 8 considered to be a better indicator.
IPART E 6.2	Percent of water treatment residuals reused	Not a significant indicator of utility operational performance. Could possibly become an NWI contextual type indicator.
IPART E 7	Total mass of heavy metals received under trade waste agreements with Sydney Water	Retained in modified form as recommended indicator E 10(S).
IPART E 8.1	Solid waste generated by Sydney Water	Retained in modified form as recommended indicator E 13(S).
IPART E 8.2	Percent of solid waste recycled or reused	Retained in modified form as recommended indicator E 12.
IPART E 9.1	Total electricity consumed by Sydney Water	Not considered a meaningful indicator of a water utility's performance.
IPART E 9.2	Total electricity consumption by water assets expressed as a function of water supplied (KWh/ML of water supplied)	Retained in modified form as recommended indicators E 3 and E 4.
IPART E 9.3	Total electricity consumption by sewer assets expressed as a function of sewage treated (KWh/ML of sewage treated)	
IPART E 9.4	Electricity consumption from renewable sources or generated by Sydney Water expressed as a percentage of total electricity consumption	Retained in modified form as indicator E 5.
IPART E 10	Number of sites under the control of Sydney Water which have been declared to be significantly contaminated under the Contaminated Land Management Act 1997	Not considered a valuable indicator. Information can be sourced from OEH which is responsible for regulation of contaminated sites.
Customers contract		

SYDNEY WATER		
Reference	**Indicator**	**Comment**
IPART C 10	Total number of customer complaints (all categories)	Not required as NWI C 13 covers billing and affordability and so captures total customer complaints.
IPART C 11.1	Number of pressure complaints	Stakeholder Workshop considered that no further breakdown of complaints required.
IPART C 11.2	Number per 1000 properties of pressure complaints	
IPART C 12.1	Total number of complaints received by Sydney Water relating to stormwater and drainage services	Problems with stormwater and drainage service are better identified through a utility's systems and specific licence obligations, and not through complaints.
IPART C 12.2	Number per 1000 properties of complaints received by Sydney Water relating to stormwater and drainage services	
IPART C 13	Number per 1000 properties of sewage odour complaints	This has not been a significant issue in the past. Also, odour complaints are regulated by OEH.
IPART C 14	Number per 1000 properties of noise complaints generated from Sydney Water's construction or operational activities	Noise complaints are regulated by OEH.
IPART C 15.1	The percentage of complaints received by Sydney Water that are resolved within 2 business days	These indicators have been consolidated and replaced by the recommended indicator C 1.
IPART C 15.2	The percentage of complaints received by Sydney Water that are resolved within 10 business days	
IPART C 16.1	The number of rebates paid pursuant to a Customer Contract in the categories in clause 7.2 of the Customer Contract	These indicators relate to system performance standards (SPS) for planned and unplanned water interruptions, low water pressure, sewage overflows, dirty water and boil water alerts. Rebates are paid in response to the degree of inconvenience suffered by customers. The SPS are audited annually as part of IPART's operational audits of the metropolitan water utilities. IPART does not use information relating to rebates paid to assess the utilities' performance in relation to SPS. Also, the number of operational incidents reported by the utilities in relation to SPS
IPART C 16.2	The value of rebates paid pursuant to a Customer Contract in the categories in clause 7.2 of the Customer Contract	

SYDNEY WATER		
Reference	**Indicator**	**Comment**
		has been trending downwards.
IPART C 17	Total number of complaints relating to recycled water	No further breakdown of complaints required.
IPART C 18.1	Percentage of metered accounts of Customers that receive a bill not based on an actual meter read during the year	Estimated bills are a problem if they occur for more than 1 billing period as there is the opportunity for a customer to be over or under-charged. A single estimated bill is not necessarily a problem.
IPART C 18.2	Percentage of metered accounts of Customers that receive a bill not based on a business meter read for two consecutive years	It is important that estimated reads do not occur over long periods as there is the opportunity for customers to be over or under-charged. 2 years is too long.
IPART C 19 1	Total number of requests for instalment or deferred payment plans	Consolidated in recommended indicators C 4 to C 8 which are considered to be more useful measures of affordability. However, these indicators will be reviewed as part of the broader review of proposed new Hardship Indicators to be undertaken in the next 12 months.
IPART C 19 2	Number per 1000 properties of requests for instalment or deferred payment plans	Retained in modified form as recommended indicator C 4.
IPART C 20.1	Number of payment assistance vouchers utilised	Sydney Water, unlike Hunter Water, no longer uses a voucher system for payment assistance, so is no longer unable to report on SWC IPART C 20.1 and C 20.2 indicators. Modified versions of these two indicators have been developed for Sydney Water – see C 9(S) and C 10(S). The existing SWC IPART C 20.1 and C 20.2 indicators have been retained in their original form for Hunter Water – see C 9(H) and C 10(H).
IPART C 20.2	Value of payment assistance vouchers utilised	
IPART C 21.1	The total number of residential customers disconnected for non-payment of amounts owed to Sydney Water	Retained in modified form as recommended indicators C 11 and C 12.

SYDNEY WATER		
Reference	**Indicator**	**Comment**
IPART C 21.2	The total number of non-residential customers disconnected for non-payment of amounts owed to Sydney Water	
IPART C 22.1	Average number of days for which water flow restrictions are applied to customers where restrictions have been removed	Average number of days is not considered a useful indicator.
IPART C 22.2	Average number of days for which water flow restrictions are applied to customers where restrictions are still in place	

HUNTER WATER		
Reference	**Indicator**	**Comment**
Infrastructure indicators		
OL WSR–1A	Number of properties affected by planned water interruptions and duration of interruption	Superseded by system performance standards in utility operating licences. As these now assessed during annual IPART operational audits of water utilities, the, Hunter Water's indicators are no longer required.
OL WSR–1B	Number of properties affected by unplanned water interruptions and durations of interruption.	
OL WSR–1C	Number of properties affected by a planned water interruption that did not commence at the time specified in the notice.	Retained indicator I 4(H)which applies solely to Hunter Water is considered to be a better indicator of water interruptions
OL WSR–2	Occurrence of water interruptions to affected properties (i.e. the number of properties experiencing 2,3,4,5 or more Planned and Unplanned water interruptions).	Retained in modified form as recommended indicators I 2 and I 3
OL WSR–3	Events leading to planned or unplanned water interruption where 250 or more properties experience an interruption of over 5hrs duration.	
OL WSR–4A	Number of properties experiencing one or more water pressure failures/incidents.	Stakeholder Workshop considered IPART SWC IPART C 6.1indicator to be a better indicator. This indicator was retained in a modified form as the recommended indicator I 5.
OL WSR–4B	Number of properties not located in a low pressure area that experienced more than one pressure incident in a financial year.	
OL SSR–1A	Number of uncontrolled sewage overflows (dry weather).	Replaced by the sewage overflow System

HUNTER WATER		
Reference	**Indicator**	**Comment**
		Performance Standard: No more than 5,000 properties (other than public properties) experience an uncontrolled sewerage overflows in dry weather in a financial year
OL SSR–1B	Number of uncontrolled sewage overflows (wet weather).	System Performance standard only applies to private properties in dry weather –regulated by OEH
OL SSR–1C	Number of properties affected by uncontrolled sewage overflow in dry weather where the period since the last uncontrolled sewage overflow in dry weather on that property is less than 12 months.	Retained indicators are considered more useful –this level of detail not required.
OL SSR–1D	Number of public property locations affected by more than one sewage overflow (wet or dry weather) where the period since the last sewage overflow at that location is less than 12 months.	Replaced by System Performance Standard - no more than 45 properties (other than public properties) experience 3 or more uncontrolled sewerage overflows in dry weather in a financial year. Sewer overflows on public property locations are also regulated by OEH through its sewage treatment system licences.
OL SSR–1E	Number of uncontrolled sewage overflows resulting from blockage in main pipe.	Aggregated - level of detail not required by IPART. Also, information can be accessed from OEH's public register.
OL SSR–1F	Number of uncontrolled sewage overflows resulting from blockage in branch pipe.	
OL SSR–1G	Number of uncontrolled sewage events due to third party damage.	
OL SSR–2	Number of uncontrolled sewage overflows on public property in dry or wet weather.	Regulated by OEH
OL SSR–3A	Number of Priority 1 sewage overflows responded to in less than and more than 1 hour.	Retained in modified form as recommended indicators I 6(H) and I 7(H)
OL SSR–3B	Number of Priority 2 sewage overflows responded to in less than and more than 3 hours.	
OL WL-1	Water losses (litres/connection/day).	Duplicate NWI indicators.
OL WL-2	Water losses (kL/km water main/day).	

HUNTER WATER		
Reference	**Indicator**	**Comment**
Environmental indicators		
OL CM-1	Total number of trees planted	Not a useful indicator for IPART.
OL WML-2	Environmental Flows released from Dams (ML)	Picked up by NWI indicators. Not particularly useful indicator for IPART.
OL TW-1	Annual number of trade waste inspections	Replaced by more useful and relevant recommended indicator E 10(S). Hunter Water does not have systems to report on this indicator in 2012/13.
OL STC-1	Total number (and nature) of breaches of conditions relating to environmental impacts under OEH sewage treatment system licences	Regulated by OEH.
OL RWQ-1	Percentage of samples complied with the recreational water quality guidelines as reported by OEH's Beachwatch program.	
OL BIO-1	Dewatered Biosolids Reused (Tonnes)	Captured by recommended indicator E11.
OL BSI-1	Total number of prosecutions and notices (including penalty notices) issued to Hunter Water under relevant environmental legislation.	Retained in modified form as recommended indicators E1 and E2.
OL BSI-2	Total number of prosecutions and notices (including penalty notices) under relevant environmental legislation issued to contractors engaged by Hunter Water.	
OL NOI-1	Total number of noise complaints generated from Hunter Water's construction or operational activities.	Regulated by OEH.
OL EC-1	Electricity consumption in buildings (kWh).	Duplicates NWI/Environmental measures.
2L EC-2	Electrical Energy Efficiency of water assets (Both kWh/ML and kWh/EP of water supplied to be included).	Retained in modified form as recommended indicators E 3 and E 4.
OL EC-3	Electrical Energy Efficiency of wastewater assets (kWh/EP of wastewater processed).	
OL EC-4	Electricity consumption from renewable sources or renewable sources generated by Hunter Water expressed as a percentage of total electricity consumption.	Retained in modified form as recommended indicator E 5.
OL WM-1	Solid waste generated (tonnes).	Used in modified form as recommended indicator E 13(S) (for Sydney Water). Hunter Water does not have systems to report on this indicator in 2012/13.

HUNTER WATER		
Reference	**Indicator**	**Comment**
OL WM-2	Waste recycled or reused expressed as a percentage of solid waste generated.	Retained in modified form as recommended indicator E 12.
OL CL-1	Number of sites under control of Hunter Water that present a significant risk of harm as defined under the *Contaminated Land Management Act 1997*.	Contaminated sites regulated by OEH.
OL ET-1	Number of staff given environmental training.	Not considered a useful indicator of utility operational performance.
OL EMP-1	Progress against objectives and targets outlined in the 2008-13 EMP.	Assessed in annual operational audit of Hunter Water.
OL CP-1	Value of sponsorship for community environmental projects.	Not a useful indicator.
OL CE-1	Number of hits on Hunter Water website.	Not a useful indicator for IPART.
OL PD-1	Number of people residing in HWC area of operations (10 year trend).	Not a useful indicator for IPART.
OL PD-2	Proportion of people residing in HWC area of operations served by treated water.	Not a useful indicator for IPART.
OL PD-3	Proportion of people residing in HWC area of operations connected to water and sewer.	Regulated by OEH.
Customers contract		
OL CS–1A	Number and type of complaints received on a monthly basis, classified by LGA and suburb, in the following categories: - water quality including health and aesthetic parameters; - continuity of water supply; - water pressure; - sewage overflow; - sewage odour; - drainage services; and - customer billing.	Not required as NWI C 13 covers billing and affordability and so captures total customer complaints. EWON complaint statistics also categorised into LGA areas.
OL CS–1B	Number and type of complaints resolved or not resolved (on a month by month basis).	Workshop considered that no further breakdown of complaints required.
OL CS–1C	Problems of a systemic nature arising from complaints.	Workshop considered that no further breakdown of complaints required.

HUNTER WATER		
Reference	**Indicator**	**Comment**
OL CS–3	Number of customers assisted through payment support and/or instalment options.	Workshop considered that no further breakdown of complaints required.
OL CS–4A	Time taken to close complaint cases by time band: - percentage less than two business days - percentage less than five business days - percentage less than ten business days	Workshop considered that no further breakdown of complaints required.
OL CS–4B	Time to close billing complaint cases by time band: - percentage less than two business days - percentage less than five business days - percentage less than ten business days	Modified and retained as C1: The percentage of complaints resolved within 10 business days.
OL CS–5A	Determinations of dispute resolution body: - the number and types of complaints received, classified in accordance with the dispute resolution body's reporting arrangements; and - any other relevant information required by IPART to be in the report.	IPART can source this information from EWON, as required.
OL CS–5B	Complaints to other bodies.	Not a useful indicator for IPART. Number of complaints to other bodies insignificant.
OL CPS-1	Overall performance rating in Domestic Customer Perceptions Survey.	These are not performance indicators and should, instead, become reporting obligations under the Operating Licences.
OL CPS-2	Community acceptance of water supply standard.	
OL CPS-3	Community acceptance of household sewage disposal service.	
OL CPS-4	Attitudes towards water conservation.	
OL WWS-1	Annual number of sewerage odour complaints generated from the sewage treatment plants or the sewerage system.	Regulated by OEH.

HUNTER WATER		
Reference	**Indicator**	**Comment**
Other indicators		
OL RW-1A	Per cent of recycled water substituting potable water use (%)	Duplicates NWI indicator. Also, covered by Metropolitan Water Plan.
OL RW-1B	Recycled water substituting potable water use (ML)	
OL WS-1	Quantity of water supplied by Hunter Water from each water storage (ML)	Considered an internal business decision and not an indicator of operational performance.
OL WS-2	Average annual residential water consumption (kL/capita)	Duplicates NWI indicator.
OL WS-3	Industrial and commercial uses (ML)	
OL WS-4	Consumption by large customers (ML)	
OL WC-1	Total volume of drinking water saved through water use efficiency (ML)	Used only for internal purposes. This is a statistic and not a performance indicator for a utility. Relevant to the Metropolitan Water Plan and as such, information is readily available, if required.
OL WR-1	Nature and length of each water restriction imposed	This is a statistic only and not a performance indicator. Also, transitory in nature.
OL WR-2	Criteria applied in determining whether to request imposition of a water restriction	Considered an internal business decision and not an indicator of operational performance. Also, transitory in nature.
OL WT-1	Components in Water Balance Table	Reported in Integrated Water Resources Plan and covered by NWI indicators A9 to A11.
OL CSD-1	Operating cost of water/ ML of water supplied	This indicator was removed as it is adequately covered by NWI Pricing and Finance indicators.

G Removed or revised IPART indicators