

Network Operator's Reporting Manual

under the *Water Industry Competition Act 2006* (NSW)

Water — Draft Reporting Manual
March 2016

Amendment Record

Issue number	Date issued	Reasons for amendment
1	1/7/2009	First release
2	9/6/2010	Additional template for nil returns
3	24/6/2015	Additional insurance expert's requirement in 2.6.1 and report template in Appendix I. Additional notification requirements before/after changes in insurance coverage in 2.6.2. Additional template for immediate licence breach reporting in Appendix D. Updated standard licence clauses in the list of licence obligations and reporting frequency in Appendix E. Updated IPART's contact details. Information restructured to improve readability.
4	10/8/2015	Provided clarification on the definition of connection point in Appendix G following stakeholder feedback. Added notification requirement for changes in environmental mitigation measures for new licensees where applicable. Document issued as final.
5	29/03/2016	Inclusion of environmental management plan and financial reporting requirements. Document issued as draft for consultation.

© Independent Pricing and Regulatory Tribunal of New South Wales 2016.

This work is copyright. The *Copyright Act 1968* permits fair dealing for study, research, news reporting, criticism and review. Selected passages, tables or diagrams may be reproduced for such purposes provided acknowledgement of the source is included.

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

Narelle Berry	(02) 9113 7722
Jamie Luke	(02) 9290 8460
Javier Canon	(02) 9113 7761

Independent Pricing and Regulatory Tribunal of New South Wales

PO Box K35, Haymarket Post Shop NSW 1240

Level 15, 2-24 Rawson Place, Sydney NSW 2000

T (02) 9290 8400 F (02) 9290 2061

www.ipart.nsw.gov.au

Invitation for comment

IPART invites written comment on this document, with a specific focus on the changes marked by **yellow highlight**, and encourages all interested parties to provide comments addressing the matters discussed.

Comments are due by 29 April 2016.

We would prefer to receive comments via email compliance@ipart.nsw.gov.au

Or you can also send comments **by mail** to:

Director, Water Licensing & Compliance.
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop NSW 1240

Contents

Invitation for submissions	iv
1 Introduction	1
1.1 Legislative framework	3
2 Compliance reporting requirements	4
2.1 Immediate licence breach reporting	4
2.2 How to lodge an immediate licence breach report	5
2.3 Annual compliance reporting	6
2.4 How to lodge an annual compliance report	7
2.5 Information regarding compliance audits	8
2.6 Other information to IPART	8
3 Process for revision	16
Appendices	17
A Checklist for annual reporting	19
B Annual compliance report format	20
C Annual compliance report format: NIL return	25
D Immediate licence breach report	26
E Licence obligations – reporting frequency	28
F Network Operator performance indicators	45
G Definitions of performance indicators	49
H Illustrative examples – applicable performance indicators	93
I Insurance expert’s report template	96
Glossary	102

1 Introduction

Licensees must ensure compliance with all licence conditions and other applicable obligations under the *Water Industry Competition Act 2006* (NSW) (the Act), the *Water Industry Competition (General) Regulation 2008* (NSW) (the Regulation) and any Codes of Conduct¹. Licence conditions are imposed via the Act, the Regulation and the licence, and may refer to other legislation, statutory instruments or documents.² Compliance requirements imposed on a licensee can vary depending on the nature, scale and complexity of its authorised activities.

The Independent Pricing and Regulatory Tribunal (IPART) is responsible for administering the licences and provides advice to the Minister for Lands and Water. To assist the licensees in preparing reporting against licence conditions, we have produced reporting manuals for network operators and retail suppliers licensed under the Act that:

- ▼ consolidate licence obligations for each licence type (in summary form)
- ▼ detail reporting requirements, including the format and the reporting timetable, and
- ▼ detail the range of performance indicators.

The reporting manuals do not reproduce in full the licence obligations for each licence type, and it is still necessary for the licensee to refer to the relevant source document for full details of the obligation.

All compliance reporting under the reporting manuals is exception-based. This means that only licence breaches are required to be reported.

¹ For example, the *Water Industry Code of Conduct*, the *Marketing Code of Conduct* and the *Transfer Code of Conduct*.

² For example, licence conditions require compliance with the Codes of Conduct, infrastructure operating plans, water quality plans and sewage management plans, and with aspects of the *Environmental Planning and Assessment Act 1979* (NSW), *Protection of the Environment Operations Act 1997* (NSW), *Public Health Act 2010* (NSW), *Plumbing Code of Australia*, *Australian Drinking Water Guidelines* and *Australian Guidelines for Water Recycling*.

We propose a number of key changes to the Network Operator's Reporting Manual, including:

- ▼ **Changes to reporting on environmental controls and mitigation measures.**
- ▼ This requirement is only applicable to licensees issued with the relevant special licence conditions in Schedule A of their licences.

Where relevant, licensees are required to:

- not commence, or authorise the commencement of, construction of any water industry infrastructure until IPART approves a Construction Environmental Management Plan (CEMP), and
- not commence commercial operation of any water industry infrastructure until IPART approves a Construction Summary Report (demonstrating effective implementation of the CEMP), and an Operational Environmental Management Plan (OEMP).

We note that the Minister's approval is also required to bring new water industry infrastructure into commercial operation.

Additionally, licensees must obtain IPART's approval prior to varying the environmental assessments, environmental controls and mitigation measures submitted as part of its licence application, or within the Environmental Management Plans submitted in accordance with licence conditions. Licensees must provide IPART with three months' notice of the proposed changes.

The changes to the need to report on environmental controls are described further in Section 2.6.3

▼ **Reporting on key financial indicators**

IPART currently assesses ongoing technical and organisational capacity through our compliance audit regime. To strengthen assessment of ongoing financial capacity we propose to require licensees to self-report on financial capacity each year. This will be done by requiring licensees to report on key financial indicators for the most recent financial year ending 30 June. Licensees will be required to provide this information in their annual compliance report which is submitted to IPART by 31 August each year.

The required indicators are:

- **Operating surplus ratio:** by what percentage does the major controllable income source vary from day to day expenses; calculated by operating result (or net result) / total operating revenue (all excluding capital items).
- **Net financial liabilities ratio:** how significant is the net amount owned compared with income; calculated by total liabilities less total assets / total operating revenue (excluding capital items).

- **Interest cover ratio:** amount of income used in paying loans (supplements the ratios above when no new infrastructure spend is required).

The changes to the need to report on key financial indicators are described further in Section 2.3.

We seek stakeholder comment on our proposed changes. In addition, the Tribunal is seeking comments from stakeholders on other areas for improvement in the reporting manual.

Please submit your feedback to compliance@ipart.nsw.gov.au by 29 April 2016, addressed to Director, Water Licensing & Compliance.

We intend to finalise the changes to the Network Operator's Reporting Manual by 1 June 2016.

The updated Network Operator's Reporting Manual will take effect from 1 July 2016, subject to feedback received. Licensed network operators will be required to report in accordance with the updated Network Operator's Reporting Manual from this date.

1.1 Legislative framework

IPART's reporting obligation:

On or before 31 October in each year, IPART must provide to the Minister a report on the extent to which licensees have complied, or failed to comply, with the conditions imposed in their licences during the 12 months ending on 30 June in that year.³ The Minister must lay the report before both Houses of Parliament as soon as practicable after receiving it.⁴

IPART also issues all licensees with a notice in writing when we inform them that their licences have been granted. This is to direct the licensee to keep any records necessary to report on compliance with the conditions of their licence and to furnish compliance reports to us in accordance with the applicable reporting manual.⁵

Licensee's reporting obligation:

It is a standard licence condition that the licensee must prepare and submit compliance reports in accordance with the applicable reporting manual (ie, Network Operator's Reporting Manual or Retail Supplier's Reporting Manual).⁶

³ *Water Industry Competition Act 2006* (NSW), section 89(1).

⁴ *Water Industry Competition Act 2006* (NSW), section 89(2).

⁵ The direction is made in accordance with section 87 of the *Water Industry Competition Act 2006* (NSW).

⁶ See standard licence condition - Schedule B of your licence.

2 Compliance reporting requirements

It is the responsibility of the licensees to rectify any licence breach as soon as possible, and report these breaches to IPART in accordance with this reporting manual.

We have classified the compliance reporting requirements for licence obligations as either:

- ▼ immediate (sections 2.1 and 2.2), or
- ▼ annual (sections 2.3 and 2.4).

This classification is based on the potential impact of a breach of the licence obligations on water quality, continuity of supply, public health, safety, other licensees and Government's policy objectives. Appendix E sets out the reporting frequency for each standard⁷ licence obligation, ie, it lists which licence obligations should be reported 'immediately' and those that should be reported 'annually' if breached. Licensees should contact IPART if the licensees are not certain of the reporting frequency applicable to their licence obligations.

This section also covers compliance reporting requirements from compliance audit findings (section 2.5) and other information as required from licence conditions (section 2.6).

2.1 Immediate licence breach reporting

Some incidents and licence breaches require the licensee to notify us and/or other stakeholders immediately.

Reporting incidents that **pose a direct risk** to water quality, public health or safety

Any incident in the conduct of the licensee's activities that threatens, or could threaten, water quality, public health or safety must be reported immediately to:

- ▼ the Minister for Health
- ▼ the Minister for Lands and Water
- ▼ IPART, and
- ▼ potentially affected licensed network operators, retail suppliers or public water utilities.

⁷ Based on current standard licence conditions template dated March 2015.

The events or incidents that require immediate notification are not further defined by the Regulation. The licensee is responsible for determining whether an incident falls into this category. The licensee should assess, and keep up to date, the likelihood and consequence of any potential incidents that could impact water quality, public health or safety in its risk assessment for the specific scheme.

Reporting incidents that **do not pose a direct risk** to water quality, public health or safety

Licence obligations that, if breached, must be reported immediately are listed in Appendix E. Some obligations, if breached, may not have a direct impact on water quality, public health or safety. However, these licence breaches may affect the licensee's ability to maintain technical, financial and organisational capacity to carry out the activities. These licence breaches must be reported to IPART but they do not need to be reported to the Minister for Health or the Minister for Lands and Water.

2.2 How to lodge an immediate licence breach report

Reporting incidents that **pose a direct risk** to water quality, public health or safety

Licensees should report such incidents in accordance with the document, "Incident Notification by Network Operators and Retail Suppliers" available from our website.⁸ **Both verbal and written notifications to IPART and other agencies are required.**

Reporting incidents that **do not pose a direct risk** to water quality, public health or safety

As soon as the licensee becomes aware that the event is likely to occur, or has occurred, the licensee should notify IPART, via:

- ▼ (02) 9113 7722 (Director, Water Licensing & Compliance)
- ▼ (02) 9113 7762 (General Manager, Licensing & Compliance)

or, email

- ▼ compliance@ipart.nsw.gov.au.

⁸ http://www.ipart.nsw.gov.au/Home/Industries/Water/Private_Sector_Licensing_WICA/Licence_Compliance_Reporting

The type of information about a licence breach that should be reported is provided in Appendix D.

- ▼ The licensee's Chief Executive Officer (or equivalent) should provide a follow-up written confirmation to IPART's Chief Executive Officer within five business days, using the template provided in Appendix D.
- ▼ Depending on how long it may take to rectify the breach, periodic reporting may also be required.
- ▼ Once the licence breach has been rectified, the licensee should notify IPART's Director, Water Licensing & Compliance, in writing via compliance@ipart.nsw.gov.au, of the actual date that full compliance was reached.

2.3 Annual compliance reporting

Licensees are required to submit annual compliance reports to us certifying that the licensee has complied with its licence obligations, during the previous financial year ending 30 June. Reporting should be exception-based. This requirement commences as soon as a licensee is granted a licence. A checklist for annual compliance reporting is provided in Appendix A. Annual reporting is required for all licence obligations.

Licensees must submit the following to IPART by no later than 31 August each year:

- ▼ Annual compliance reports:
 - If the licensed schemes **have commenced construction or commercial operation**, licensees should use the annual compliance report template provided in Appendix B. The licensee should also include performance indicators, performance standards, **key financial indicators** (as detailed in sub-sections below), and a brief summary of any breaches identified by audits during the financial year (see section 2.5). This summary should include an update of any further actions the licensee has taken with respect to the breach, or
 - If the licensees have **not engaged in any activities** authorised by their licences (including construction) during the 12 months ending on 30 June, use the annual compliance report template: NIL return in Appendix C.
- ▼ A brief summary of any 'immediate' licence breaches (see section 2.1).

The annual compliance report must be signed by:

- ▼ the Chief Executive Officer (or equivalent), and
- ▼ the Chairman of the Board or a duly authorised Board member other than the Chief Executive Officer.

Performance Indicators

Licensees are also required to submit performance indicators as part of their annual compliance reports. These are classified as National Water Initiative (NWI) indicators and WICA indicators (see Appendix F).

Where an indicator is not relevant or applicable to a particular licensee's activities, the licensee should indicate in its annual compliance report 'not applicable' in relation to that particular indicator. If an indicator is relevant but the activity has not commenced, a zero should be reported.

Performance Standards

Licensees must also report on the performance standards established in their Infrastructure Operating and Water Quality and/or Sewage Management Plans (Licence Plans) in their annual compliance reports (See Appendix E, Network Operator Table #26, #30, #56 and #62).

Key Financial Indicators

Licensees must also report on key financial indicators for the most recent financial year ending 30 June in their annual compliance reports. The required indicators are:

- ▼ **Operating surplus ratio:** by what percentage does the major controllable income source vary from day to day expenses; calculated by operating result (or net result) / total operating revenue (all excluding capital items).
- ▼ **Net financial liabilities ratio:** how significant is the net amount owned compared with income; calculated by total liabilities less total assets / total operating revenue (excluding capital items).
- ▼ **Interest cover ratio:** amount of income used in paying loans (supplements the ratios above when no new infrastructure spend is required).

2.4 How to lodge an annual compliance report

All annual compliance reports should be lodged electronically, with a follow-up hard copy sent by mail. Licensees should provide the name and contact details (phone, email) of a primary contact. An alternate contact should also be provided for when the primary contact is unavailable.

Email addressed to: compliance@ipart.nsw.gov.au

Hard copy addressed to: **The Chief Executive Officer**
Independent Pricing and Regulatory Tribunal of NSW
PO Box K35
Haymarket Post Shop NSW 1240

2.5 Information regarding compliance audits

In our report to the Minister, we will include summaries of licence breach or non-compliance information, performance indicators and standards provided by licensees in their annual compliance reports to us. We will also include any breaches identified in compliance audits conducted in the financial year ending 30 June. The licensee should include licence breaches identified in compliance audits in their annual compliance reports.

For a network operator's licence compliance audits:

- ▼ We determine the frequency and scope of auditing a licensee's operational compliance with their licence conditions and requirements of the Act and Regulation.
- ▼ We base the audit frequency and scope on the licensee's consequences of licence breach and likelihood of licence breach informed by previous performance.
- ▼ We have a risk-based approach to auditing and do not require all clauses of the licence to be audited every year. This approach ensures auditing reflects the type, size, complexity and level of risk associated with the licensee's activity.
- ▼ We also require the following audits:⁹
 - Licence Plans audits to assess compliance of a licensee's licence plans¹⁰ with the relevant guidelines or standards, and legal requirements.
 - New infrastructure audits to assess compliance of new infrastructure with the licence plans and legal requirements.
 - Incident-related audits to assess the licensee's operational compliance with the legal and formal requirements, triggered in response to a significant licence breach incident that threatens, or could threaten water quality, public health or safety.

2.6 Other information to IPART

Licensees are required to provide other information or notification to IPART as set out in conditions in Schedule B of the licence.

Unless otherwise stated, information or notification provided to IPART should be lodged electronically via compliance@ipart.nsw.gov.au, and addressed to Director, Water Licensing & Compliance.

⁹ Further information on the audits and their requirements are included in the documents, *Audit Guideline for Greenfield Schemes* and *Audit Guideline for Brownfield Schemes* available on our website at http://www.ipart.nsw.gov.au/Home/Industries/Water/Private_Sector_Licensing_WICA/Audit_Guidelines_Technical_Services_Audit_Panel

¹⁰ This may include audits of the licensee's Infrastructure Operating Plan and Water Quality Plan and/or Sewage Management Plan.

In the correspondence, the licensee should provide the name, licence number, contact details (phone and email) of the primary contact and an alternate contact for those times when the primary contact is unavailable.

2.6.1 Insurance Expert's Report

As a standard condition of the licence, licensees are required to provide a report from an insurance expert certifying that in the insurance expert's opinion, the type and level of the insurance obtained (and maintained) by the licensee is appropriate for the size and nature of the activities authorised under the licence.

An Insurance Expert's Report template outlining our expectations is provided in Appendix I. The report may be formatted to suit the style of the author, provided that all of the content requested is provided. Requirements for the delivery of this report are outlined in Schedule B of the network operator licence. We may request an additional Insurance Expert's Report in accordance with Schedule B of the Network Operator licence.

2.6.2 Change in insurance coverage

Licence granted, varied or reviewed before March 2015

Whenever there is a change in type, scope or limit on the amount of insurance held by the licensee in relation to the activities authorised under the Licence, the network operator must provide a copy of each certificate of currency to IPART within 10 business days of the change being made.

Licence granted, varied or reviewed from March 2015

In March 2015 IPART changed its recommended standard licence to include the requirement that licensees must report to IPART where there is to be a change in insurance coverage under licence condition B3.3.

The changes in insurance and the reporting requirements are:

Change in insurance coverage includes		Period of notification	Information to provide to IPART where applicable
<ul style="list-style-type: none"> ▼ Insurer ▼ Underwriting panel ▼ Type ▼ Scope ▼ Sum insured/ Limit on the amount/ Limit on indemnity 	Increase in coverage	30 days after the change	<ul style="list-style-type: none"> ▼ Name and Australian financial services licence number of new insurer ▼ Name and Australian financial services licence number of new underwriting panel ▼ New product disclosure statement(s) ▼ Reasons for change ▼ Revised certificate of currency once finalised
	Reduction in coverage	14 days prior to change initiated by the insurer	
		45 days prior to change initiated by the licensee	

2.6.3 Environmental controls and mitigation measures

This requirement is only applicable to licensees issued with the relevant special licence conditions in Schedule A of their licences.

Licensees are required to implement environmental mitigation measures to ensure the activities that the licence authorises are carried out in a manner that do not present a significant risk of harm to the environment. Often, the mitigation measures will have been identified in the environmental assessments or risk assessments submitted as part of the licence application, and referred to within Schedule A of their licences.

Environmental Management Plans are specific plans prepared to ensure that relevant environmental mitigation measures are implemented during a scheme's construction or operation.

As outlined in the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure Planning and Natural Resources, 2004) an effective Environmental Management Plan should ensure:

- ▼ licensees comply with applicable environmental legislation
- ▼ the commitments and obligations from a project's environmental assessment and conditions of consent are applied
- ▼ environmental risks are characterised
- ▼ environmental controls are appropriate for managing the risks, and
- ▼ environmental controls are properly implemented.

Pre-Construction

Where specified by a licence condition licensees must not commence, or authorise the commencement of, construction of any water industry infrastructure until IPART approves a Construction Environmental Management Plan (CEMP).

A CEMP should allow IPART to determine that licensees can carry out construction works without significant risk of harm to the environment. Licensees must ensure the CEMP is:

- ▼ submitted to IPART for review at least three months prior to the proposed construction date
- ▼ complies with the document *Guideline for the Preparation of Environmental Management Plans*, Department of Infrastructure Planning and Natural Resources, 2004
- ▼ specific to the construction works proposed and authorised by the licence
- ▼ includes the environmental risks, commitments and obligations identified in the environmental assessment and conditions of consent
- ▼ describes the controls and mitigation measures to ensure each of the environmental risks, commitments and obligations are effectively managed, and
- ▼ describes the way in which the project's environmental performance will be evaluated.

Pre-operation

Where specified by a licence condition licensees must not commence commercial operation of any water industry infrastructure until IPART approves a Construction Summary Report and an Operational Environmental Management Plan (OEMP).

Construction Summary Report

The Construction Summary Report should allow IPART to verify that the CEMP was effectively implemented and that environmental risks were appropriately managed, prior to the Minister granting approval of commercial operation. Licensees must ensure Construction Summary Report is:

- ▼ submitted to IPART for review at least three months prior to the proposed date of commencement of commercial operation
- ▼ documents how each of the controls and mitigation measures identified in the CEMP were implemented
- ▼ summarises environmental monitoring results and inspections conducted during the construction phase

- ▼ summarises all non-compliances (if any) against the CEMP, environmental assessment and environmental legislation, and
- ▼ summarises all complaints and incidents (if any) relating to the environment that occurred during the construction period, and corrective actions undertaken to resolve any issues and prevent reoccurrence.

Operational Environmental Management Plan

An OEMP should allow IPART to determine that licensees can carry out commercial operations, without significant risk of harm to the environment. The Licensee must ensure that the OEMP is:

- ▼ submitted to IPART for review at least three months prior to the proposed date of commencement of commercial operation
- ▼ complies with the document *Guideline for the Preparation of Environmental Management Plans*, Department of Infrastructure Planning and Natural Resources, 2004
- ▼ specific to the operations authorised by the licence
- ▼ includes the environmental risks, commitments and obligations identified in the environmental assessment and conditions of consent
- ▼ describes the controls and mitigation measures to ensure each of the environmental risks, commitments and obligations are effectively managed, and
- ▼ describes the way in which the project's environmental performance will be evaluated.

Changes to environmental assessments, environmental controls and mitigation measures

IPART's approval is required prior to licensees varying:

- ▼ the environmental assessments submitted as part of its licence application, or
- ▼ the controls and mitigation measures identified within the environmental assessments or Environmental Management Plans (submitted in accordance with licence conditions).

Licensees must provide IPART with three months' notice of the proposed changes.

Licensees must ensure that their written notification includes the following details:

- ▼ relevant licence number and licence conditions
- ▼ descriptions of the environmental controls and mitigation measures before and after the proposed change, reasons for change and consequence of change

- ▼ the title and date of the environment assessment report(s) where the environmental mitigation measures were originally identified
- ▼ attach any additional environmental assessments undertaken to support and justify the need for the proposed change, and
- ▼ the expected date of the proposed change.

2.6.4 Monitoring results

Any water quality or sewage monitoring that a licensee may be required to report in their annual compliance report (eg, performance indicators), or undertake for the purposes of their licence or licence plans, must be conducted in accordance with the requirements set out below.

The following records must be kept (and provided if requested) of any samples collected:

- ▼ date on which the sample was taken
- ▼ time at which the sample was collected
- ▼ point or location at which the sample was taken, and
- ▼ chain of custody of the sample (if applicable).

A laboratory accredited for the specified tests by an independent body acceptable to NSW Health, such as the National Association of Testing Authorities (NATA) or equivalent, shall carry out all analyses of samples.

2.6.5 Information in relation to the Register of Licences

In addition to any other obligations required by the Act, Regulation, licence conditions or within the Reporting Manuals, licensees must provide written notice within 14 days of changes to any of the following listed in IPART's Register of Licences:¹¹

- ▼ any source from which the water handled by the Specified Water Industry Infrastructure is derived
- ▼ the Authorised Purposes of the water handled by the Specified Water Industry Infrastructure
- ▼ the identity of each licensed retail supplier or public water utility that has access to the infrastructure services provided by the Specified Water Industry Infrastructure for the purpose of providing water services to its customers
- ▼ any other water supply infrastructure to which the Specified Water Industry Infrastructure is connected

¹¹ *Water Industry Competition (General) Regulation 2008* (NSW), clauses 18(1) – 18(5).

- ▼ the identity of each licensed retail supplier or public water utility that has access to infrastructure services provided by the Specified Water Industry Infrastructure for the purpose of providing sewerage services to its customers
- ▼ any other sewerage infrastructure to which the Specified Water Industry Infrastructure is connected, and
- ▼ the arrangements for the disposal of waste from the Specified Water Industry Infrastructure.

We will review this information and update our Register of Licences. Please note that in some cases, a licence variation would be required prior to proceeding with the change.

2.6.6 Changes to end-use(s)

Licensees must provide written notice at least three months before the proposed change in end-use(s) if the licensee proposes to operate the Specified Water Industry Infrastructure to supply water for an end-use, which is not set out in the most recent Water Quality Plan provided to IPART.

The end-use(s) specified in the Water Quality Plan may be more narrowly defined than those specified in the licence. If the proposed end-uses are consistent with the authorised purposes specified in the licence, the Water Quality Plan would need to be updated. If the changes in authorised purposes are not consistent, a licence variation will be required.

2.6.7 Changes to Authorised Person(s)

Licensees must provide written notice as soon as practicable but no later than 28 days before the date of cessation of the services if an Authorised Person ceases, proposes to cease, or receives notification to cease providing any of the services relating to the activities authorised by the licences.

The written notice must also include details of how the services after the Authorised Person ceased to provide those services will continue to be undertaken.

2.6.8 Commencement of commercial operation

The Minister's approval is required prior to commencement of commercial operation. The Minister will not approve the commercial operation of any scheme without the provision of a satisfactory infrastructure audit report.¹²

¹² Refer to WICA Audit Guidelines, July 2013.

In addition to the above requirement, licensees must provide written notice within 10 business days of commencing commercial operation of Specified Water Industry Infrastructure authorised by a network operator's licence.

Licensees must notify us **after** they have commenced commercial operation.

Licensees must ensure that their written notification includes the following details:

- ▼ the relevant licence number
- ▼ the Specified Water Industry Infrastructure that has been brought into commercial operation, including a reference to the relevant table in the network operator's licence (if relevant), and
- ▼ the date commercial operation started.

3 | Process for revision

Appropriate reporting and auditing requirements for each condition may vary over time to reflect licensees' previous compliance performance and evolving regulatory and government policy frameworks.

Changes to the reporting manuals, including amendments to the classification of licence obligations, may be necessary to:

- ▼ include new licence obligations
- ▼ delete redundant licence obligations
- ▼ reflect new government initiatives, and
- ▼ rectify problems identified through compliance monitoring and reporting.

We will consult the relevant licensees and other interested stakeholders before making any significant revisions to the reporting requirements or indicators. We will then notify the stakeholders of the revisions to the reporting manual and the commencement date of any new reporting arrangements. In determining the commencement date for new reporting arrangements, we will allow a reasonable period for licensees to implement the new arrangements.



Appendices

A Checklist for annual reporting

By no later than 31 August each year, all licensees must lodge a hard and electronic Annual Compliance Report comprising of the following:

- ☐ Annual Compliance Report Certification
 - ☐ Licence breach schedule
 - ☐ Performance Indicators
 - ☐ **Key financial indicators**
 - ☐ Name and contact details (phone, email) of the main person we can liaise with when assessing the Licensee's compliance. Please also nominate an alternate person for those times when the main contact is unavailable.
- } See templates in Appendices B & F

A template for annual compliance reporting where a licensee has not engaged in any activities authorised by its Licence is provided as Appendix C.

B Annual compliance report format

Annual Compliance Report *[Insert Year]*

For 20__/__/__

Submitted by [Licensee]

ACN: [ACN]

To: The Chief Executive Officer
Independent Pricing and Regulatory Tribunal of NSW
PO Box K35
Haymarket Post Shop NSW 1240

[Name] reports as follows:

1. This report documents compliance during [most recent financial year ending 30 June] with all obligations to which [Licensee] is subject by virtue of its Network Operator's Licence.
2. This report has been prepared by [Licensee] with all due care and skill in full knowledge of conditions to which it is subject and in compliance with IPART's current Network Operator's Reporting Manual under the *Water Industry Competition Act 2006* (NSW).
3. Schedule A provides information on all obligations with which [Licensee] did not fully comply during [financial year].
4. Other than the information provided in Schedule A, [Licensee] has complied with all conditions to which it is subject.
5. Performance Indicators about [Licensee's] operations is provided in Schedule B.
6. This compliance report has been approved by the Chief Executive Officer (or equivalent)¹³ and the Board of Directors of [Licensee] at its meeting on [date].
7. IPART should liaise with [Name of primary contact] when assessing [Licensee]'s compliance. [Name of primary contact] may be contacted at [telephone number], [email address].

¹³ Some Licensees may not have CEOs. In these circumstances, an alternate officer who has day-to-day management control of the business may verify the report. If there is any doubt about who should sign the report, businesses are requested to contact the Director, Water Licensing & Compliance.

8. If [Name of primary contact] is unavailable at any time, IPART should liaise with [Name of alternate contact]. [Name of alternate contact] may be contacted at [telephone number], [email address].

DATE:

DATE:

Signed

Signed

Name:

Name:

Designation:

Designation:

Schedule A Non Compliances¹⁴

Table # ^a	List obligations breached, including a brief description of each obligation ^b	Describe:
		<ul style="list-style-type: none"> i Date or period of licence breach ii Nature and extent of licence breach (including whether and how many customers and/or other Licence holders have been affected) iii Results of any monitoring (where applicable) iv Reasons for licence breach v Remedial action taken vi Actual/anticipated date of full compliance

^a See Appendix E. Licensees should indicate, for example, Network Operator Table #29.

^b See Appendix E. Licensees should include, for example: WIC (General) Reg cl 9, WIC (General) Reg Schedule 1, cl 1(1) - A network operator must provide the Minister or IPART with such information as required in relation to Licensee's activities under Licence.

¹⁴ Licensees should report only breaches that were identified during the reporting period.

Schedule B Performance indicators¹⁵

NWI Indicator # or WICA Indicator # ^a	Indicator description ^b	Report in relation to indicator ^c
---	---------------------------------------	--

^a See Appendix F, last column. Licensees should indicate, for example: NWI W1 or WICA#3.

^b See Appendix F, middle column. Licensees should enter short description of indicator, for example: Volume of water sourced – Surface Water (ML).

^c See Appendix G, Definitions. Licensees should report against the relevant indicator in accordance with the Definitions. Values should be reported as indicated, for example, in ML, minutes, km or other manner indicated in the Definitions. Additional details required under the Definitions should also be reported, for example, WICA#1 requires the nature of the other source or sources to be identified (eg, stormwater, rainwater) and, if there is more than one source, the volume of each source to be specified.

¹⁵ See Appendix F for a full list of Network Operator's performance indicators. The Licensee must report against all applicable indicators, as determined by IPART in consultation with the Licensee.

Schedule C Key financial indicators

Indicator	Indicator description	Report in relation to indicator ^a
Operating surplus ratio	Shows the extent (by percentage) that the major controllable income source varies from day to day expenses. Calculated by operating result (or net result) / total operating revenue (all excluding capital items).	
Net financial liabilities ratio	Shows how significant net ownership is compared with income. Calculated by total liabilities less total assets / total operating revenue (excluding capital items)	
Interest cover ratio	Shows the amount of income used to pay loans. Calculated by dividing earnings (before interest and taxes) by interest expenses.	

^a: data should be for most recent financial year ending 30 June.

C Annual compliance report format: NIL return

Annual compliance report: Nil return

For 20__/__/__

Submitted by [*name of company*]

ACN: [ACN]

To: The Chief Executive Officer
Independent Pricing and Regulatory Tribunal of NSW
PO Box K35
Haymarket Post Shop NSW 1240

I make the following declaration for and on behalf of the company:

1. The company currently holds the following New South Wales WIC Act Licence(s) (strike out any that do not apply):
 - retail supplier
 - network operator.
2. During the reporting period, the company did not engage in any activities authorised under the WIC Act Licence/s it holds.
3. IPART should liaise with [Name of primary contact] when assessing [Licensee]'s compliance. [Name of primary contact] may be contacted at [telephone number], [email address].
4. If [Name of primary contact] is unavailable at any time, IPART should liaise with [Name of alternate contact]. [Name of alternate contact] may be contacted at [telephone number], [email address].

Note: This declaration must be signed and completed by the Chief Executive Officer (or equivalent) of the business.

DATE:

Signed

Name:

Designation:

D Immediate licence breach report

Immediate licence breach report

Time of licence breach [Insert date and time]

Submitted by [Licensee]

ACN: [ACN]

To: The Chief Executive Officer
Independent Pricing and Regulatory Tribunal of NSW
PO Box K35
Haymarket Post Shop NSW 1240

I make the following declaration for and on behalf of the company:

1. The company currently holds the following New South Wales WIC Act Licence(s) (strike out any that do not apply):
 - retail supplier
 - network operator.

2. On [Insert date] and at [insert time], the following licence clause(s) was/were breached:

[Insert licence clauses(s) breached]

3. Schedule A provides information on the licence breach(es) incurred by [Licensee].
4. Once the licence breach(es) have been rectified, [Licensee] will notify IPART of the actual date of full compliance.

Note: This declaration must be signed and completed by the Chief Executive Officer (or equivalent) of the business.

DATE:

Signed

Name:

Designation:

Schedule A Details of licence breach(es)

Details of licence breach	
Date and time that IPART <i>Director, Water Licensing & Compliance</i> was notified of breach	
Extent and nature of breach/ non- compliance (brief description)	
How many customers are affected?	
How many other licensees are affected?	
Reason(s) for licence breach	
Result(s) of any monitoring (if applicable)	
Action(s) taken to rectify the breach and prevent reoccurrence	
Contact details for person managing response to event	Name: Telephone number: Email address: Address:
Anticipated date of full compliance	

E Licence obligations – reporting frequency

This Appendix sets out the reporting frequency allocated to each licence obligation. Each licence obligation has been classified with a reporting frequency of either ‘immediate’ or ‘annual’ reporting.

Immediate reporting is limited to those licence obligations where a breach could have serious consequences, for example, the breach could threaten continuity of supply, public health or safety, or have a critical impact on the Government’s policy objective(s), or have significant impacts on other licensees.

Annual reporting is required for all other obligations. However, licensees should also summarise any ‘immediate’ licence breaches in the Annual Compliance Reports to IPART.

Licensees should read and understand the obligations applicable to them in their specific licences. **As soon as a licensee is aware of any breach, rectify the breach as soon as possible.**

The licensee must identify which obligation has been breached, and note whether the reporting requirement is ‘immediate’ or ‘annual’ in accordance with this appendix. If ‘immediate’ reporting is required, refer to section 2.1 and 2.2. If ‘annual’ reporting is required, refer to section 2.3 and 2.4.

Examples:

- ▼ A licensee has started to supply non-potable water for an end-use which is not set out in the Recycled Water Quality Plan. The licensee has not notified IPART in writing three months before commencing such operation. As soon as it realised there is a breach, it should rectify the situation, and identify that it has breached licence condition B11.1. The reporting frequency is classified as ‘immediate’ (see #113 in Appendix E). The licensee should follow immediate reporting requirements in section 2.1 and 2.2.
- ▼ A licensee has not read a water meter that it has installed to supply a premises for over 4 months. As soon as it is aware of such breach, it should rectify the situation, and identify that it has breached the WIC Regulation Schedule 1, clause 8(2)(b). The reporting frequency is classified as ‘annual’ (see #36 in Appendix E). The licensee should follow annual reporting requirements in section 2.3 and 2.4.

Network operator – general reporting requirements

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting ¹⁶	Verification
1	WICA section 14(3)	WICA section 14(3)	A network operator must pay the annual Licence fee determined by the Minister.	Annual	CEO and Board
2	WICA section 18(2)	WICA section 18(1)	A network operator must comply with any direction of the Minister to take specified action to reduce or eliminate a risk to public health or public safety arising from certain activities.	Immediate	CEO
3	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(1)	A network operator must provide the Minister or IPART with such information as the Minister or IPART may require from time to time in relation to the Licensee's activities under Licence, and must provide it within such time as specified in that direction.	Annual	CEO and Board
4	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(2)(a)	A network operator must immediately notify IPART of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Immediate	CEO
5	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(2)(b)	A network operator must immediately notify the Minister administering the <i>Public Health Act 2010</i> (NSW) and the <i>Public Health Regulation 2012</i> (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Immediate	CEO
6	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(2)(c)	A network operator must immediately notify the Minister administering Part 2 of the <i>Water Industry Competition Act 2006</i> (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Immediate	CEO
7	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(2)(d)	A network operator must immediately notify any licensed retail supplier that supplies water or provides sewerage services by means of the licensee's infrastructure of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Immediate	CEO

¹⁶ Notification of an incident that threatens, or could threaten, water quality, public health or safety must be made in accordance with the document "Incident Notification by Network Operators and Retail Suppliers" available from our website at www.ipart.nsw.gov.au. However, where a Licensee has failed to provide immediate notification of an incident that should have been immediately notified, a breach of this licence obligation has occurred which must be reported immediately in accordance with sections 2.1 and 2.2 of this reporting manual.

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting ¹⁶	Verification
8	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(2)(e)	A network operator must immediately notify any licensed network operator or public water utility whose infrastructure is connected to the licensed network operator's infrastructure of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Immediate	CEO
9	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(3)(a)	A network operator must permit publication on IPART's website of matters as are required to be recorded on the Register of Licences.	Annual	CEO and Board
10	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(3)(b)	A network operator must permit the disclosure between relevant government agencies of information the network operator has provided to any one of them.	Annual	CEO and Board
11	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 1(3)(c)	A network operator must permit disclosure to the general public of information about incidents reported to the Minister or relevant government authority.	Annual	CEO and Board
12	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 2(1)	A network operator must not bring any new water or sewerage infrastructure into commercial operation without the written approval of the Minister.	Immediate	CEO
13	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 2(2)(a)	The network operator must provide to the Minister a report, prepared by an approved auditor that indicates that the infrastructure complies with the requirements of the Regulation and any licence conditions.	Immediate	CEO
14	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 2(2)(b)	The network operator must provide to the Minister a report, prepared by an approved auditor that indicates that the infrastructure is capable of operating safely and in accordance with its infrastructure operating plan and its water quality or sewage management plan, as the case requires.	Immediate	CEO
15	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 3(a)	The network operator must ensure that the water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to the purposes for which it is licensed.	Annual	CEO and Board
16	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 3(b)	The network operator must ensure that the water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to the licence conditions.	Annual	CEO and Board
17	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 3(c)	The network operator must ensure that the water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to any publicly available standards or codes relating to its design, construction, operation and maintenance.	Annual	CEO and Board

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting ¹⁶	Verification
18	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 4(1)(a)	In its activities under the licence, a network operator must comply with the requirements of the <i>Environmental Planning and Assessment Act 1979</i> (NSW) and any environmental planning instruments under that Act.	Annual	CEO and Board
19	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 4(1)(b)	In its activities under the licence, a network operator must comply with the requirements of the <i>Protection of the Environment Operations Act 1997</i> (NSW) and any regulations under that Act, in relation to the protection of the environment.	Annual	CEO and Board
20	WIC (General) Reg cl 9	WIC (General) Reg Schedule 1, cl 5	A network operator must comply with any water industry code of conduct, marketing code of conduct and transfer code of conduct.	Annual	CEO and Board

Network Operators – water infrastructure – general reporting requirements

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
21	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(1)(a)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the design, construction, operation and maintenance of the infrastructure, including particulars as to the life-span of the infrastructure, the system redundancy built into the infrastructure and the arrangements for the renewal of the infrastructure.	Immediate	CEO
22	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(1)(b)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the continued safe and reliable performance of the infrastructure.	Immediate	CEO
23	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(1)(c)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the continuity of water supply.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
24	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(1)(d)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to alternative water supplies when the infrastructure is inoperable.	Immediate	CEO
25	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(1)(e)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the maintenance, monitoring and reporting of standards of service.	Immediate	CEO
26	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(2)(a)	The network operator must ensure that the infrastructure operating plan is fully implemented and kept under regular review and all of the network operator's activities are carried out in accordance with that plan.	Annual	CEO and Board
27	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(2)(b)	The licensee must, if the Minister so directs, amend its infrastructure operating plan in accordance with the Minister's direction.	Annual	CEO and Board
28	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(3)(a)	If any significant change is made to its infrastructure operating plan (or the Minister or IPART demands it), the network operator must provide a copy of the amended plan to IPART and an approved auditor, and provide the Minister or IPART with a report, prepared by the approved auditor, regarding the adequacy of the plan and the condition of its infrastructure having regard to the purposes for which it was licensed.	Annual	CEO and Board
29	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 6(3)(b)	Alternatively, the network operator must pay the Minister's or IPART's cost of investigation into the adequacy of the plan or condition of the infrastructure.	Annual	CEO and Board
30	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(4)(a)	The network operator must ensure that its water quality plan is fully implemented and kept under regular review and the network operator's activities are carried out in accordance with that plan.	Annual	CEO and Board
31	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(4)(b)	If the Minister so directs, amendments to the network operator's water quality plan are made in accordance with the Minister's direction.	Annual	CEO and Board
32	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(5)(a)	If any significant change is made to its water quality plan (or the Minister or IPART demands it), the network operator must provide IPART with an amended copy of the plan and provide the Minister or IPART with a report, prepared by an approved auditor, regarding the adequacy of the plan.	Annual	CEO and Board

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
33	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(5)(b)	Alternatively, the network operator must pay the Minister's or IPART's costs of conducting an investigation into the adequacy of the plan.	Annual	CEO and Board
34	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 8(1)	Any water meter that is connected to a network operator's water main must comply with the requirements of the <i>Plumbing Code of Australia</i> .	Annual	CEO and Board
35	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 8(2)(a)	While water is being supplied to premises in respect of which a water meter has been installed, a network operator must ensure that the water meter is properly maintained and periodically tested.	Annual	CEO and Board
36	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 8(2)(b)	While water is being supplied to premises in respect of which a water meter has been installed, a network operator must ensure that the water meter is read at intervals of no more than 4 months.	Annual	CEO and Board
37	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 8(2)(c)	While water is being supplied to premises in respect of which a water meter has been installed, a network operator must ensure that written notice of each meter reading is sent to the relevant licensed retail supplier.	Annual	CEO and Board
38	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 11	Customer's installations are not connected to the network operator's water main or sewer main unless the installation complies with the <i>Plumbing and Drainage Act 2011</i> (NSW).	Annual	CEO and Board
39	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 12(a)	The network operator must have an internet website on which a plan showing the nature and general location of the infrastructure is available for inspection by members of the public.	Annual	CEO and Board
40	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 12(d)	The network operator must have an internet website on which the most recent auditor's report under clause 6 that applies to the network operator is available for inspection by members of the public.	Annual	CEO and Board
41	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 12(e)	The network operator must have an internet website on which the most recent auditor's report under clause 7 that applies to the network operator is available for inspection by members of the public.	Annual	CEO and Board

Network Operators – water infrastructure for drinking water only – reporting requirements

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
42	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(1)(a)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, the licensed network operator must prepare, and forward to IPART, a water quality plan in relation to the water supplied from the infrastructure that specifies how the 12 elements for the framework for the management of drinking water quality, as detailed in the <i>Australian Drinking Water Guidelines</i> , have been addressed and will be implemented.	Annual	CEO and Board
43	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(2)	A network operator's water quality plan in relation to water infrastructure for drinking water must be consistent with the <i>Australian Drinking Water Guidelines</i> .	Annual	CEO and Board
44	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 9(a)	A network operator of water infrastructure to supply drinking water must ensure the water supplied is fit for human consumption.	Immediate	CEO
45	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 9(b)	A network operator of water infrastructure to supply drinking water must ensure the water supplied complies with any requirements of the licence conditions.	Immediate	CEO
46	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 9(c)	A network operator of water infrastructure to supply drinking water must ensure the water supplied complies with any requirements under the <i>Public Health Act 2010</i> (NSW) and the <i>Public Health Regulation 2012</i> (NSW) in relation to the supply of safe drinking water.	Immediate	CEO

Network operators – water infrastructure for non-potable water only – reporting requirements

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
47	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(1)(b)	Before commencing to operate water infrastructure commercially/Within 6 months of being granted a network operator's licence for water infrastructure, the licensed network operator must prepare, and forward to IPART, a water quality plan in relation to the non-potable water supplied from the infrastructure that specifies how the 12 elements for the framework for the management of recycled water quality, as detailed in the <i>Australian Guidelines for Water Recycling</i> , have been addressed and will be implemented, and, having regard to those guidelines, the purposes for which the water may be used /not used.	Annual	CEO and Board

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
48	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 7(3)	A network operator's water quality plan in relation to water infrastructure for non-potable water must be consistent with the <i>Australian Guidelines for Water Recycling</i> .	Annual	CEO and Board
49	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 10(a)	The network operator under a licence for water infrastructure to supply non-potable water for a particular purpose must ensure that the water supplied is fit for that purpose.	Annual	CEO and Board
50	WIC (General) Reg cl 9(a)	WIC (General) Reg Schedule 1, cl 10(b)	The network operator under a licence for water infrastructure to supply non-potable water for a particular purpose must ensure that the water supplied complies with any requirements of the licence conditions.	Immediate	CEO

Network Operators - sewerage infrastructure – general reporting requirements

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
51	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(1)(a)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the design, construction, operation and maintenance of the infrastructure, including particulars as to the life-span of the infrastructure, the system redundancy built into the infrastructure and the arrangements for the renewal of the infrastructure.	Immediate	CEO
52	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(1)(b)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the continued safe and reliable performance of the infrastructure.	Immediate	CEO
53	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(1)(c)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the continuity of sewerage services.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
54	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(1)(d)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to alternative sewerage services when the infrastructure is inoperable.	Immediate	CEO
55	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(1)(e)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART an infrastructure operating plan that indicates the arrangements the network operator has made, or proposes to make, in relation to the maintenance, monitoring and reporting of standards of service.	Immediate	CEO
56	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(2)(a)	The infrastructure operating plan is fully implemented and kept under regular review and all of the network operator's activities are carried out in accordance with that plan.	Annual	CEO and Board
57	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(2)(b)	If the Minister has directed, amendments to the network operator's infrastructure operating plan, such amendments were completed in accordance with the Minister's direction.	Annual	CEO and Board
58	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(3)(a)	If any significant change is made to its infrastructure operating plan (or the Minister or IPART demands it), the network operator must provide a copy of the amended plan to IPART and an approved auditor and provide the Minister or IPART with a report, prepared by the approved auditor, regarding the adequacy of the plan and the condition of its infrastructure having regard to the purposes for which it was licensed.	Annual	CEO and Board
59	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 13(3)(b)	Alternatively, the network operator must pay the Minister's or IPART's cost of investigation into the adequacy of the plan or condition of the infrastructure.	Annual	CEO and Board
60	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(1)(a)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART a sewage management plan that indicates the manner in which health and ecological assessments will be undertaken and any concerns arising from any such assessment addressed.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
61	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(1)(b)	Before commencing to operate sewerage infrastructure commercially/Within 6 months after being granted a network operator's licence for sewerage infrastructure, a network operator must prepare and forward to IPART a sewage management plan that indicates the arrangements for the disposal of waste from the infrastructure.	Immediate	CEO
62	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(3)(a)	A network operator must ensure its sewage management plan is fully implemented and kept under regular review and all its activities are carried out in accordance with the plan.	Annual	CEO and Board
63	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(3)(b)	A network operator must, if the Minister so directs, amend its sewage management plan in accordance with the Minister's direction.	Annual	CEO and Board
64	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(4)(a)	On demand by the Minister or IPART, or if any significant change is made to its sewage management plan, a network operator must provide the Minister or IPART with a report, prepared by an approved auditor, as to the adequacy of its plan.	Annual	CEO and Board
65	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 14(4)(b)	Alternatively, the network operator must pay the Minister's or IPART's costs in conducting an investigation into the adequacy of its plan.	Annual	CEO and Board
66	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 16(a)	A network operator must have an internet website on which certain matters are available for inspection by members of the public.	Annual	CEO and Board
67	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 16(b)	The network operator must have an internet website on which the <i>Infrastructure Operating Plan</i> is available for inspection by members of the public.	Annual	CEO and Board
68	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 16(c)	The network operator must have an internet website on which the <i>Sewage Management Plan</i> is available for inspection by members of the public.	Annual	CEO and Board
69	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 16(d)	The network operator must have an internet website on which the most recent auditor's report under clause 13 that applies to the network operator is available for inspection by members of the public.	Annual	CEO and Board
70	WIC (General) Reg cl 9(b)	WIC (General) Reg Schedule 1, cl 16(e)	The network operator must have an internet website on which the most recent auditor's report under clause 14 that applies to the network operator is available for inspection by members of the public.	Annual	CEO and Board

Network Operators - reporting requirements under Schedule A of the Licence

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
71	Licence, Schedule A - Ministerially-imposed Licence conditions	Schedule A, cl A1.1 Table 1.1, A2.1 Table 2.1, A3.1 Table 3.1	The network operator and the authorised third parties have constructed, operated and/or maintained the water industry infrastructure.	Immediate	CEO
72	Licence, Schedule A - Ministerially-imposed Licence conditions	Schedule A, cl A1.1 Table 1.2, A2.1 Table 2.2, A3.1 Table 3.2	The network operator and the authorised third parties have constructed, operated and/or maintained the water industry infrastructure specified in the Licence.	Immediate	CEO
73	Licence, Schedule A - Ministerially-imposed Licence conditions	Schedule A, cl A1.1 Table 1.3, A2.1 Table 2.3, A3.1 Table 3.3	The network operator and the authorised third parties have constructed, operated and/or maintained the water industry infrastructure for the authorised purposes.	Immediate	CEO
74	Licence, Schedule A - Ministerially-imposed Licence conditions	Schedule A, cl A1.1 Table 1.4, A2.1 Table 2.4, A3.1 Table 3.4	The water industry infrastructure constructed, operated and/or maintained by the network operator or an authorised third party does not extend outside the area of operations.	Immediate	CEO

Network Operators - reporting requirements under Schedule B of licence

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
75	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B1	The network operator must have the technical capacity to carry out the activities authorised by this Licence. If the Licensee ceases to have this capacity, it must report this to IPART immediately.	Immediate	CEO
76	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B1	The network operator must have the financial capacity to carry out the activities authorised by this Licence. If the Licensee ceases to have this capacity, it must report this to IPART immediately.	Immediate	CEO
77	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B1	The network operator must have the organisational capacity to carry out the activities authorised by this Licence. If the Licensee ceases to have this capacity, it must report this to IPART immediately.	Immediate	CEO
78	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B2.1(a) or 2.2(a)(i)	Before commencing to commercially operate the <i>Specified Water Industry Infrastructure</i> under this Licence, the network operator must obtain insurance that is appropriate for the size and nature of the activities authorised under the Licence.	Immediate	CEO
79	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B2.1(b) or 2.2(a)(ii)	Before commencing to commercially operate the <i>Specified Water Industry Infrastructure</i> under this Licence, the network operator must provide a copy of each certificate of currency of the insurance obtained to IPART.	Immediate	CEO
80	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B2.1(c) or 2.2(b)	Before commencing to commercially operate the <i>Specified Water Industry Infrastructure</i> under this Licence/Within 6 months of the date on which this Licence is granted or by a later date specified by IPART (if any), the network operator must demonstrate that the insurance obtained is appropriate for the size and nature of the activities authorised under the Licence by providing a report to IPART from an Insurance Expert that: (i) certifies that in the Insurance Expert's opinion, the type and level of the insurance obtained by the Licensee is appropriate for the size and nature of the activities authorised by the Licence (ii) is in the form prescribed by the reporting manual (see Appendix I).	Immediate	CEO
81	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B3.1	The network operator must maintain insurance that is appropriate for the size and nature of the activities authorised under the Licence.	Immediate	CEO
82	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B3.2	The network operator must provide a copy of each certificate of currency of the insurance maintained by the Licensee to IPART in accordance with the reporting manual.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
83	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B3.3	If there is to be a change in: a) the insurer or underwriting panel in respect of an insurance policy held by the Licensee; or b) the type, scope or limit on the amount of insurance held by the Licensee, in relation to the activities authorised under this Licence, the Licensee must provide a report to IPART in accordance with the reporting manual.	Immediate	CEO
84	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B3.4	When requested in writing by IPART, the network operator must provide a report to IPART, in the manner, form and time specified by IPART, from an Insurance Expert, certifying that in the Insurance Expert's opinion, the type and level of insurance held by the Licensee is appropriate for the size and nature of the activities authorised under the Licence.	Immediate	CEO
85	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B3.5	The network operator must maintain professional indemnity insurance during the Design Phase and for a minimum period of 6 years from the date of the completion of the Design Phase.	Annual	CEO and Board
86	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B4	The network operator must carry out activities authorised by the licence in compliance with any requirements of NSW Health that IPART has agreed to and are notified from time to time to the Licensee by IPART in writing.	Immediate	CEO
87	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B5	The network operator must comply with any Audit Guidelines issued by IPART.	Annual	CEO and Board
88	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B6	The network operator must prepare and submit reports in accordance with the reporting manual.	Annual	CEO and Board
89	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(a)	Within 14 days of any change to any source from which the water handled by the <i>Specified Water Industry Infrastructure</i> is derived, the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
90	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(b)	Within 14 days of any change to the Authorised Purposes of the water handled by the <i>Specified Water Industry Infrastructure</i> , the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
91	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(c)	Within 14 days of any change to the identity of each licensed retail supplier or public water utility that has access to the infrastructure services provided by the <i>Specified Water Industry Infrastructure</i> for the purpose of supplying water to its customers, the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
92	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(d)	Within 14 days of any change to any other water infrastructure to which the <i>Specified Water Industry Infrastructure</i> is connected, the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
93	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(e)	Within 14 days of any change to the identity of each licensed retail supplier or public water utility that has access to infrastructure services provided by the <i>Specified Water Industry Infrastructure</i> for the purpose of providing sewerage services to its customers, the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
94	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(f)	Within 14 days of any change to any other sewerage infrastructure to which the <i>Specified Water Industry Infrastructure</i> is connected, the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
95	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B7.1(g)	Within 14 days of any change to the arrangements for the disposal of waste from the <i>Specified Water Industry Infrastructure</i> , the network operator must notify IPART, and provide details, of the change in accordance with the reporting manual.	Immediate	CEO
96	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.1	The network operator must undertake any monitoring that is required for the purposes of the Licence, any Plan, the Act or the Regulation in accordance with this clause.	Annual	CEO and Board
97	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.2(a)	The network operator must keep records of any samples taken for monitoring purposes specified in the <i>Water Quality Plan</i> on the date on which the sample was taken.	Annual	CEO and Board
98	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.2(b)	The network operator must keep records of any samples taken for monitoring purposes specified in the <i>Water Quality Plan</i> at the time at which the sample was collected.	Annual	CEO and Board
99	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.2(c)	The network operator must keep records of any samples taken for monitoring purposes specified in the <i>Water Quality Plan</i> at the point or location at which the sample was taken.	Annual	CEO and Board

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
100	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.2(d)	The network operator must keep records of any samples taken for monitoring purposes specified in the <i>Water Quality Plan</i> at the chain of custody of the sample (if applicable).	Annual	CEO and Board
101	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B8.3	The network operator must ensure that analyses of all samples taken for the purposes of Verification Monitoring are carried out by a laboratory accredited for the specified tests by an independent body that is acceptable to NSW Health, such as the National Association of Testing Authorities, or an equivalent body.	Annual	CEO and Board
102	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B9	Whenever the network operator makes a significant amendment to a Plan, the Licensee must provide a copy of the amended Plan to IPART at the same time that it provides a copy to the approved auditor engaged to prepare a report as to the adequacy of the amended Plan, as required under the Regulation.	Immediate	CEO
103	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.1	Delineating responsibility – interconnections If a code of conduct has not been established under cl. 25 of the Regulation, the Licensee must establish its own code of conduct by the date specified by IPART.	Annual	CEO and Board
104	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(a)	The network operator's <i>Code of Conduct</i> must set out of the respective responsibilities of the Licensee.	Annual	CEO and Board
105	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(b),(c)	The network operator's <i>Code of Conduct</i> must set out of the respective responsibilities of each licensed network operator, licensed retail supplier and/or public water utility that supplies water, provides sewerage services or constructs, maintains or operates any other water industry infrastructure in the <i>Specified Area of Operations</i> , by, at a minimum, providing for, if the <i>Specified Water Industry Infrastructure</i> is connected to any other water industry infrastructure, who is responsible for repairing, replacing or maintaining any pipes, pumps, valves, storages or other infrastructure connecting the <i>Specified Water Industry Infrastructure</i> to the water industry infrastructure.	Annual	CEO and Board
106	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(d)	The network operator's <i>Code of Conduct</i> must set out of the respective responsibilities of who is responsible for water quality.	Annual	CEO and Board

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
107	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(e)	The network operator's <i>Code of Conduct</i> must set out who is liable in the event of unavailability of water.	Annual	CEO and Board
108	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(f)	The network operator's <i>Code of Conduct</i> must set out who is liable in the event of failure of the Specified Water Industry Infrastructure.	Annual	CEO and Board
109	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(g)	The network operator's <i>Code of Conduct</i> must set out the fees and charges payable in respect of the use of the Specified Water Industry Infrastructure.	Annual	CEO and Board
110	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.2(h)	The network operator's <i>Code of Conduct</i> must set out who is responsible for handling customer complaints.	Annual	CEO and Board
111	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.3 or B10.4	Before the network operator brings the <i>Specified Water Industry Infrastructure</i> into commercial operation or by a later date specified by IPART (if any)/Within 6 months of the date on which the Licence is granted or by a later date specified by IPART (if any), the Licensee's <i>Code of Conduct</i> must agree in writing between the Licensee and other licensed network operators, licensed retail suppliers and/or public water utilities	Annual	CEO and Board
112	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B10.5	The network operator must not contravene the Licensee's <i>Code of Conduct</i> to the extent that it makes the Licensee responsible or liable for the matters set out in it.	Annual	CEO and Board
113	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B11.1	If the network operator proposes to operate the <i>Specified Water Industry Infrastructure</i> to supply water for an end-use which is not set out in the most recent Water Quality Plan provided to IPART, the Licensee must notify IPART in writing at least 3 months before commencing such operation.	Immediate	CEO
114	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B12.1	If an Authorised Person ceases, proposes to cease, or receives notification to cease providing any of the services relating to the activities authorised by this Licence, the network operator must provide IPART with written notice as soon as practicable but no later than 28 days before the date of cessation of the services. The written notice must include details of how the services previously undertaken by the Authorised Person will continue to be undertaken.	Immediate	CEO

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
115	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B13.2(a)	If the network operator has brought any <i>Specified Water Industry Infrastructure</i> into commercial operation, the Licensee must notify IPART in accordance with the reporting manual that it has brought the relevant <i>Specified Water Industry Infrastructure</i> into commercial operation.	Immediate	CEO
116	Licence, Schedule B - Ministerially-imposed Licence conditions	Schedule B, cl B13.2(b)	If the network operator has brought any <i>Specified Water Industry Infrastructure</i> into commercial operation, the Licensee must provide such notification within 10 days after it has brought the relevant <i>Specified Water Industry Infrastructure</i> into commercial operation.	Immediate	CEO

Network operators – specified Licensees only¹⁷

#	Licence Condition	Obligations under condition	Brief description of obligation	Reporting	Verification
#	[Licensee's name], Licence number #	Schedule A, cl A#	[Brief description]	[Immediate/ Annual]	[CEO/ CEO and Board]
#	[Licensee's name], Licence number #	Schedule A, cl A#	[Brief description]	[Immediate/ Annual]	[CEO/ CEO and Board]

¹⁷ Some Licensees will be subject to non-standard Ministerially-imposed Licence conditions specific to their licensed activities. At this point in time, IPART anticipates that non-standard Ministerially-imposed Licence conditions will be the exception, rather than the rule. Please contact IPART if this applies to your licence.

F Network Operator performance indicators

Important note:

The majority of the following Network Operator performance indicators and their corresponding definitions were developed by the National Water Commission (NWC) as part of the “National Benchmarking Framework for Rural and Urban Water Utilities”. These indicators are notated as “NWI Indicators” below. Where necessary, we have made minor modifications to some of the NWI Indicators and their corresponding definitions to adapt them to the regulatory regime provided under the Act. In particular, given the scale of activities licensed under the Act (many of which are anticipated to be small scale), NWI Indicators that use a measure of ‘per 1,000 properties’ are to be reported in actual numbers *or* per 1,000 properties (where possible). NWI Indicators in relation to service interruptions have been modified to apply to ‘connection points’ instead of ‘customers’.

We have also developed a small number of indicators and corresponding definitions required in relation to the Act and Regulation. These are notated as “WICA Indicators” below. We have endeavoured to define the WICA Indicators in a manner consistent with definitions used for the NWI Indicators, and to build on existing NWI Indicators where possible.

Indicator Set	Indicator	NWI Indicator #. or WICA Indicator #
Sources of water	Volume of water sourced:	
	– Surface Water (ML)	NWI W1
	– Groundwater (ML)	NWI W2
	– Desalination (ML)	NWI W3
	– Recycling (ML)	NWI W4
	– Bulk Supplier (ML)	NWI W5
	– Volume of bulk recycled water purchased (ML)	NWI W6
	– Other (ML)(please specify)	WICA#1
	Total volume of water sourced (ML)	NWI W7
Sewage collected	Volume of sewage collected – residential sewage, non-residential sewage and non-trade waste (ML)	NWI W16
	Volume of sewage collected – trade waste (ML)	NWI W17
	Total volume of sewage collected (ML)	NWI W18
Volume of water supplied (Uses of water supplied)	Volume of water supplied – other (ML)	NWI W10
	Volume of water supplied – On-site (ML)	WICA#2
	Volume of water supplied for environmental flows (ML)	NWI W13
	Volume of bulk water exports (ML)	NWI W14
	Total volume of water supplied (ML)	WICA#3

Indicator Set	Indicator	NWI Indicator #. or WICA Indicator #
Volume of recycled water supplied (Uses of recycled water)	Volume of bulk recycled water exports (ML)	NWI W15
	Volume of recycled water supplied – environmental flows (ML)	NWI W23
	Volume of recycled water supplied – on-site (ML)	NWI W24
	Volume of recycled water supplied – other (ML)	NWI W25
	Total of recycled water supplied (ML)	NWI W26
Infrastructure	Length of water mains (km)	NWI A2
	Length of potable water mains (km)	WICA#4
	Length of non-potable water mains (km)	WICA#5
	Length of sewerage mains and channels (km)	NWI A5
	Number of water treatment plants providing full treatment	NWI A1
	Number of recycled water treatment plants	NWI A7
	Number of sewage treatment plants	NWI A4
Infrastructure performance	Number of water main breaks (per 100 km water main)	NWI A8
	Number of sewerage breaks and chokes (per 100 km of sewer main)	NWI A12
	Property connection breaks and chokes (per 100 km of sewer main)	NWI A13
	Number of sewage treatment plants compliant at all times (eg, 5/6)	NWI E5
Service Interruptions	Average duration of unplanned interruption – water (minutes)	NWI C15
	Average duration of planned interruption – water (minutes)	WICA#6
	Average duration of unplanned interruption – potable water (minutes)	WICA#7
	Average duration of planned interruption – potable water (minutes)	WICA#8
	Average duration of unplanned interruption – non-potable water (minutes)	WICA#9
	Average duration of planned interruption – non-potable water (minutes)	WICA#10
	Average sewerage interruption (minutes)	NWI C16

Indicator Set	Indicator	NWI Indicator #. or WICA Indicator #
	Average frequency of unplanned interruption – water	NWI C17
	Average frequency of planned interruption – water	WICA#11
	Average frequency of unplanned interruption – potable water	WICA#12
	Average frequency of planned interruption – potable water	WICA#13
	Average frequency of unplanned interruption – non-potable water	WICA#14
	Average frequency of planned interruption – non-potable water	WICA#15
	Average frequency of unplanned interruption – sewerage	WICA#16
Environmental	Sewer overflows reported to environmental regulator (per 100 km of sewer main)	NWI E13
	Percent of sewage volume treated that was compliant (%)	NWI E4
	Compliance with environmental regulator – sewerage (yes/no)	NWI E7
	Percent of biosolids reused	NWI E8
Water quality	Number of zones where microbiological compliance was achieved (eg, 23/24)	NWI H2
	Percent (%) of population where microbiological compliance was achieved	NWI H3
	Number of zones where chemical compliance was achieved (eg, 23/24)	NWI H4

Please refer to the applicable “Definitions” in Appendix G.

G Definitions of performance indicators

G.1 Sources of water

Reported indicators	Indicator number
Volume of water sourced from surface water (ML)	W1
Volume of water sourced from groundwater (ML)	W2
Volume of water sourced from desalination (ML)	W3
Volume of water sourced from recycling (ML)	W4
Volume of water received from bulk supplier (ML)	W5
Volume of bulk recycled water purchased (ML)	W6
Volume of water sourced from other sources (ML)	WICA#1
Total sourced water (ML)	W7

Raw data collected

1. Volume of water sourced from surface water (ML). (W1)
2. Volume of water sourced from groundwater (ML). (W2)
3. Volume of water sourced from desalination (ML). (W3)
4. Volume of water sourced from recycling (ML). (W4)
5. Volume of water received from bulk supplier (ML). (W5)
6. Volume of bulk water purchased (ML). (W6)
7. Volume of water sourced from other sources (ML). (WICA#1)
8. Total sourced water (ML). (W7)

Purpose

To report the volumes of water abstracted from various water sources to supply the utility's customers in the reporting period. It may also provide an indication of the diversity of supply sources, potential environmental issues, water treatment issues and a partial explanation for the relative operating and total cost of water of the utility compared to other utilities (eg, a utility supplied mostly by desalination may have a higher cost structure than one relying mostly on gravity fed water from dams).

Definitions

W1 - Volume of water sourced from surface water

The total volume of water (potable and non-potable) abstracted by the utility from surface water sources such as dams, rivers or irrigation channels during the reporting period.

W2 - Volume of water sourced from groundwater

The total volume of water (potable and non-potable) abstracted from groundwater during the reporting period.

To avoid double counting this excludes volumes sourced from groundwater supplies that have been artificially recharged using sources of water that have been counted elsewhere ie:

- ▼ rivers
- ▼ desalination plants, and
- ▼ sewerage treatment plants (recycling).

Other forms of artificial recharge (ie, storm water) not counted elsewhere are to be included.

W3 - Volume of water sourced from desalination

The total volume of water (potable and non-potable) sourced from desalination plants during the reporting period.

W4 - Volume of water sourced from recycling

The total volume of water supplied by the water utility sourced from recycled water during the reporting period including recycled water from direct or indirect reuse. This should be the sum of residential, industrial/commercial, municipal irrigation and on-site substitution (where it replaces potable water). Water supplied for agribusiness by the utility should also be included where potable water (or raw supply to the potable system) would normally be used.

Note: This differs from Indicator W26; Total recycled water supplied (ML) where any agricultural and on-site uses are counted.

W5 - Volume of water received from bulk supplier

The total volume of water (potable and non-potable) purchased from another utility or entity outside this utility's geographic area of responsibility. The volume of water will include water which is subsequently exported (sold) to another utility.

W6 - Volume of bulk recycled water purchased

The total volume of recycled water purchased from another utility or another entity outside this utility's geographic area of responsibility.

WICA#1 - Volume of water sourced from other sources

The total volume of water sourced from any other source not listed above. The nature of the source or sources should be identified (eg, stormwater, rainwater) and, if there is more than one source, the volume of each source should also be specified.

W7 - Total sourced water

This is the sum of the volumes reported above as supplied from dams, river extraction, groundwater, desalination, recycling, bulk supplier, stormwater and rainwater.

Units

Megalitres (ML).

G.2 Uses of water supplied

Reported indicators	Indicator number
Volume of water supplied - Other (ML)	W10
Volume of water supplied – On-site (ML)	WICA#2
Volume of water supplied - Environmental flows (ML)	W13
Volume of bulk water exports (ML)	W14
Total volume of water supplied (ML)	WICA#3
Volume of bulk recycled water exports (ML)	W15

Raw data collected

1. Other water supplied (ML). (W10)
2. Water supplied on-site (ML). (WICA#2)
3. Environmental flows supplied (ML). (W13)
4. Volume of bulk water exports (ML). (W14)
5. Total volume of water supplied (ML). (WICA#3)
6. Volume of bulk recycled water exports (ML). (W15)

Purpose

To report the distribution of total water supplied.

Definitions

W10 - Volume of water supplied - Other

Total metered and estimated non-metered water (potable and non-potable) supplied to other users. This would include, but may not be limited to, an estimate of water used for fire fighting, mains flushing, losses due to customer meter errors, leakage or contractors and any other consumption due to operations.

WICA#2 - Volume of water supplied - On-site

Water used on-site external to the treatment process (If some volumes are estimated, this should be noted on the data). For each such on-site use, specify the use (eg, on-site irrigation or toilet flushing) and volume involved in that use.

W13 - Volume of water supplied - Environmental flows

Wholesale flow allocations to the environment, generally upstream of the master meter, for the reporting period as specified in the environmental flow management regime generally required by the relevant natural resource management agency. Accidental or unintentional releases should not be included unless they can be incorporated into the environmental flow management regime.

W14 - Volume of bulk water exports

The total volume of water (potable and non-potable) sold to another utility or another entity outside this utility's geographic area of responsibility. The volume of water will include water originated from another source (see example 1).

WICA#3 - Total volume of water supplied (ML)

The total volume of water supplied for environmental flows and of bulk water exports as determined above.

W15 - Volume of bulk recycled water exports

The total volume of recycled water sold to another utility or another entity outside this utility's geographic area of responsibility.

Units

Megalitres (ML).

Examples

- Utility A Bulk supplier sells 100 ML water sourced from surface water to Utility B Retailer who then treats the total volume. Utility B Retailer then sells 60 ML to Utility C Retailer who in turn sells a proportion of this to Utility D Retailer. In this example, Utility A Bulk supplier would include 100 ML water as bulk water exports and would report this water as sourced from surface water. Utility B Retailer would include 100 ML water as bulk of water purchased from a bulk supplier but would not report the water as sourced from surface water.

G.3 Sewage collected

Reported indicators	Indicator number
Volume of sewage collected - Residential sewage, non-residential sewage and non-trade waste (ML)	W16
Volume of sewage collected -Trade waste (ML)	W17
Total sewage collected (ML)	W18

Raw data collected

- Residential sewage, non-residential sewage and non-trade waste collected (ML). (W16)
- Trade waste collected (ML). (W17)
- Total sewage collected (ML). (W18)

Purpose

To provide an overview of the volume of sewage collected by the utility.

Definitions

W16 - Volume of sewage collected - Residential sewage, non-residential sewage and non-trade waste

Sewage received from residential, non-residential and non-trade waste sources. This also includes any volumes collected in the sewage system due to stormwater, illegal connection inflow and infiltration to the sewerage system. Residential (domestic) sewage is the water borne waste derived from human origin comprising of faecal matter, urine and liquid household waste from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings.

W17 - Volume of sewage collected - Trade waste

Total volume of estimated and metered trade waste collected and treated by the water utility, or on behalf of the water utility. This includes any volumes of stormwater collected in the trade waste system. Trade waste (industrial waste) is the liquid waste generated from any industry, business, trade, or manufacturing process. It does not include domestic sewage.

W18 - Total sewage collected

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 eg, wholesaler. Where only treatment plant outflow is measured, record this value and comment appropriately. This measure should equal the sum of volumes reported for residential, non-residential and non-trade sewage collected and trade sewage collected.

Note: Residential and non-residential sewage and trade waste are defined as per either *The National Water Management Strategy Guidelines for Sewerage Systems 1994* or state-based legislation.

Units

Megalitres (ML).

G.4 Uses of recycled water

Reported indicators	Indicator number
Volume of recycled water supplied - Environmental (ML)	W23
Volume of recycled water supplied - On-site (ML)(specify)	W24
Volume of recycled water supplied - Other (ML)	W25
Total recycled water supplied (ML)	W26

Raw data collected

1. Environmental recycled water supplied (ML). (W23)
2. On-site recycled water supplied (ML). (W24)
3. Other recycled water supplied (ML). (W25)
4. Total recycled water supplied (ML). (W26)

Purpose

To report the volume of recycled water supplied. It may also be used to report the distribution of recycled water in the business.

Definitions

W23 - Volume of recycled water supplied - Environmental

Recycled water discharged to a waterway for environmental purposes as prescribed by the environmental regulator. There must be a quality characteristic that is a net benefit to the environment as determined by the relevant regulator, such as water discharged to rivers, the sea, or natural wetlands (if some volumes are estimated, this should be noted on the data). This may exclude non harvestable forests and bushland if the regulator determines there is 'disposal' rather than 'beneficial use'.

W24 - Volume of recycled water supplied - On-site

Recycled water used on-site external to the treatment process. (If some volumes are estimated, this should be noted on the data). Total volumes of recycled water supplied within the period ie, volumes must capture total water supplied in a continuous process irrespective of whether it is reused within a cycle. For each such on-site use, specify the use and volume involved in that use (eg, on-site irrigation of golf greens - 200 ML).

W25 - Volume of recycled water supplied - Other

Total estimated non-metered recycled water supplied to other users. This would include, but may not be limited to, an estimate of water used for fire fighting, mains flushing, losses due to customer meter errors, leakage or contractors and any other consumption due to operations.

W26 - Total recycled water supplied

The sum of all treated effluent that is used by either the water utility itself, or a business supplied by the water utility, or supplied through a third pipe system for urban reuse. Evaporation is excluded. The parameters are the total sewage collected and the volume of effluent recycled (see examples 1, 2, 3 and 4).

Recycled water can be provided for onsite reuse, agriculture, irrigation, industry, potable or other use external to the treatment process.

Note:

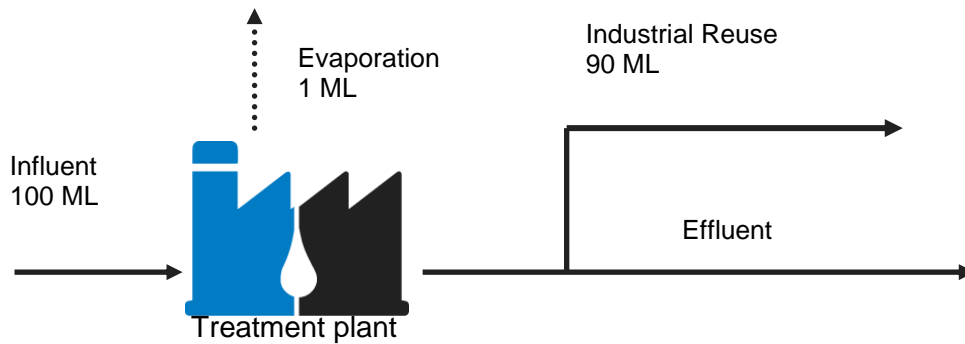
- 1. Recycled water supplied to clubs, sporting fields, or other businesses is included.*
- 2. Environmental flows are included if they are approved by the EPA and substitute raw water abstraction or are recognised as an environmental flow by regulator/authority.*
- 3. Sewer mining extracted from the utility's mains is an accepted form of recycling.*

Units

Megalitres (ML).

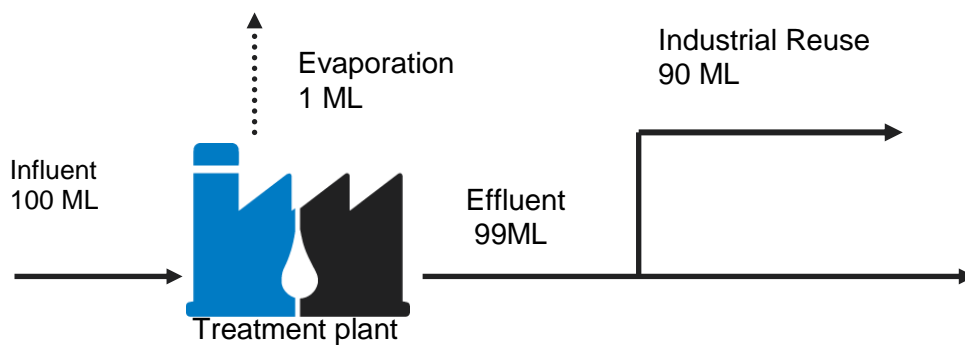
Examples

1. Recycled water is supplied to industry for use. No onsite reuse occurs.



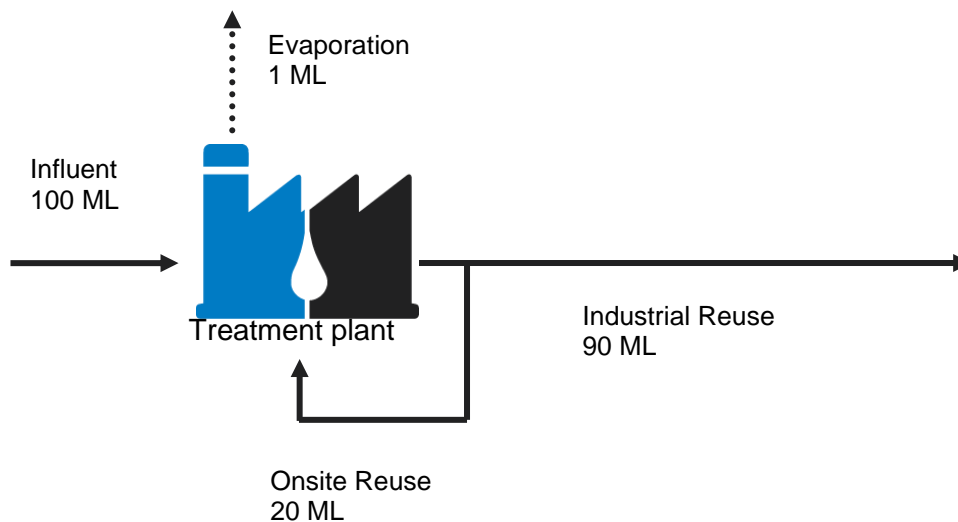
$$\text{Per cent of Water Recycled} = \frac{\text{Volume of Water Recycled}}{\text{Volume of Influent} - \text{Net Evaporation}} = \frac{90}{100-1} = 90.9\%$$

2. Recycled water is supplied to industry for use. No onsite reuse occurs.



$$\text{Per cent of Water Recycled} = \frac{\text{Volume of Water Recycled}}{\text{Volume of Effluent}} = \frac{90}{99} = 90.9\%$$

3. Recycled water is used on site and supplied to industry for use.

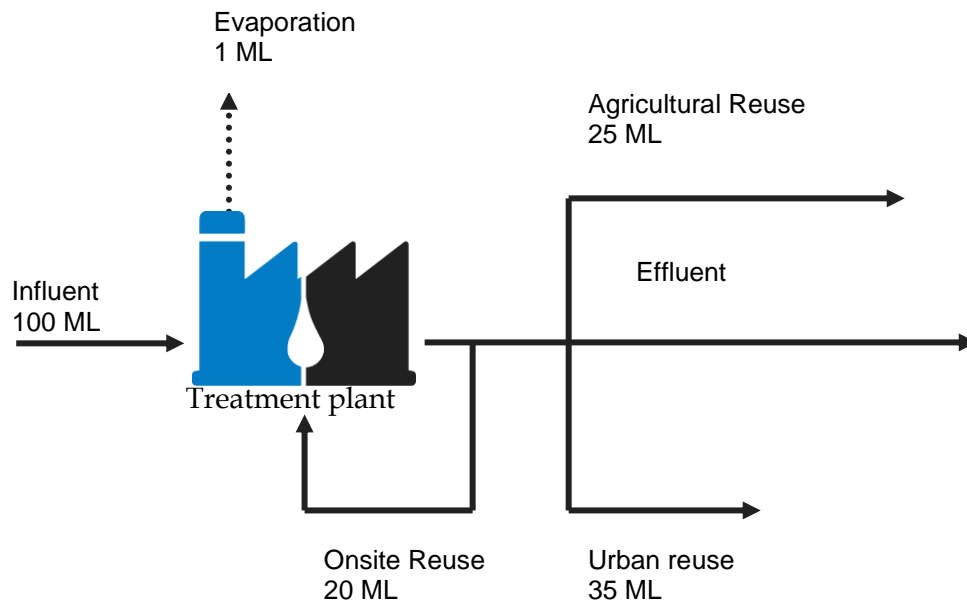


$$\text{Per cent of Water Recycled} = \frac{\text{Vol of Water Recycled}}{\text{Vol of Influent} - \text{Net Evaporation}} = \frac{(20+90)}{(100-1)} = 111.1\%$$

Note:

Where a percentage greater than 100% is achieved please provide a footnote to explain the figure and aid reader understanding of the process.

4. Recycled water is used on site, supplied for agricultural reuse and supplied for urban reuse through a third pipe system to urban households for toilet flushing and garden watering and for irrigation of open space community facilities.



$$\text{Per cent of Water Recycled} = \frac{\text{Vol of Water Recycled}}{\text{Vol of Influent} - \text{Net Evaporation}} = \frac{(20+25+35)}{(100-1)} = 80.8\%$$

5. A market garden historically abstracts 40 ML of river water per year for irrigation purposes. In the reporting period, the water utility supplies 30 ML of recycled water to the market garden, which subsequently abstracts only 10 ML of river water. The volume of recycled water substituting raw water abstraction is 30 ML.
6. Water supplied per residential property within a water utility's service area is 220 kL/a (W12). The water utility supplies 30 000 kL of recycled water to 1000 properties via a third pipe system for toilet flushing and garden watering. Whilst the total water supplied per property remains unchanged, potable water consumption for properties also supplied with recycled water decreases by 30 kL per year (ie, 190 potable + 30 recycled = 220 kL residential water supplied per property). The 30 000 kL of recycled water supplied therefore is included as **BOTH** residential water supplied and total recycled water supplied.

G.5 Water treatment plants

Reported indicators	Indicator number
Number of water treatment plants providing full treatment	A1

Raw data collected

1. Number of water treatment plants providing full treatment.

Purpose

To report the level of treatment and complexity of treatment provided to bring water quality to an acceptable level for the customer. This indicator can also provide a partial explanation of a utility's relative operating cost and total cost. Eg, a utility providing full treatment for most of its supply would have a significantly higher cost structure than one providing lesser treatment, eg, disinfection only or 'further treatment'.

Definitions

Water treatment plant

An individual location receiving raw or partially treated water for treatment and ultimate delivery to customers. There may be more than one water treatment plant at an individual facility. Secondary or booster disinfection plants are not included, even where they have pH correction. Water treatment plants that provide fluoridation only should be classified as disinfection only.

Full treatment

Generally, the water treatment plant is a substantial structure involving multiple treatment methods to achieve high quality water. The treatment plant would generally include processes that remove colour and/or turbidity as well as providing filtration and disinfection. In addition to the above, it may include processes for taste and/or odour reduction, softening, pH correction and the targeted removal of elements and compounds such as iron, manganese, nitrates and pesticides (see example 3).

Note:

1. Secondary disinfection plants should not be counted, even when they have pH correction as well.
2. Build-Operate-Own-Transfer (BOOT) schemes should be included.

Examples

1. Typical disinfection only processes include chlorination, chloramination, ozonation and/or ultraviolet treatment and should be excluded.
2. Typical further treatment processes include pH correction, softening and taste or odour reduction and should be excluded.
3. Typical full treatment processes—generally in addition to pH correction, and/or taste reduction, and/or odour reduction—include coagulation, flocculation, sedimentation, filtration, disinfection, membrane filtration and reverse osmosis.

G.6 Other water assets

Reported indicators	Indicator number
Length of water mains (km)	A2
Length of potable water mains (km)	WICA#4
Length of non-potable water mains (km)	WICA#5

Raw data collected

1. Length of water mains (km).
2. Length of potable water mains (km).
3. Length of non-potable water mains (km).

Purpose

To report on the scale of the utility's water mains distribution and reticulation network. It also provides an indication of the ease or difficulty of delivery of water to customers and is used as a normaliser for a number of other indicators. It is independent of source assets so as to facilitate comparison of water schemes.

Definitions

A2 - Length of water mains

The total length of water mains including all: transfer, distribution, reticulation mains, and recycled water distribution and reticulation mains delivering water for urban areas. The length of water mains excludes:

- ▼ Mains associated with property water service (mains to meter) connections.
- ▼ Mains delivering recycled water for non-urban uses, eg, agriculture reuse.
- ▼ Disused pipe lengths should not be counted, even if they are maintained by the water utility for possible future use.

- ▼ Privately owned mains.
- ▼ Mains associated with source works eg, borefield mains.
- ▼ Mains and channels associated with sources which transfer water to treatment facilities or from scheme to scheme.
- ▼ Mains associated with facilities eg, mains within pump stations, storage facilities or treatment plants.

Note:

- 1. Utilities that provide water services to a number of urban centres either within a region, local government, or state-wide and are reporting the performance of these urban centres as part of the national performance framework either separately or aggregated must also report length of water mains used in providing the services to those urban centres. If the assets are used for multiple urban centres which are reported separately then they must be apportioned in a manner which is consistent with their use. Apportionment in line with the volume of water used or consumed by the urban centre reported is an acceptable way to apportion the length of these mains.*
- 2. The definition for length of water mains refers to 'delivery of potable water and non-potable water to customers'. If a bulk water supplier does not treat water to a potable level, these indicators will not be relevant for them.*
- 3. Ferrule is part of the service connection.*

WICA#4 - Length of potable water mains

The total length of potable water mains, including potable water distribution and reticulation mains delivering potable water for urban areas, subject to the same exclusions and notes above.

WICA#5 - Length of non-potable water mains

The total length of non-potable water mains, including non-potable water distribution and reticulation mains delivering non-potable water for urban areas, subject to the same exclusions and notes above.

Units

Kilometres (km).

G.7 Sewerage assets

Reported indicators	Indicator number
Number of sewage treatment plants	A4
Length of sewerage mains and channels (km)	A5

Raw data collected

1. Number of sewage treatment plants. (A4)
2. Length of sewerage mains and channels (km). (A5)

Purpose

To report on the scale of the utilities sewerage network.

Definitions

A4 - Number of sewage treatment plants

The total number of sewage treatment plants providing sewage services to customers. This includes all primary, secondary and tertiary level treatment plants.

Note: BOOT schemes should be included.

A5 - Length of sewer mains and channels

The total length of mains and channels, including all trunk, pressure and reticulation mains. It does not include lengths associated with property connection sewers or conduits carrying treated effluent.

Note: Combined sewerage and stormwater mains are included.

Conduits and pipelines, (eg, feeding paddocks for grass and land filtration), downstream from the treatment plant should be excluded.

Units

Kilometres (km).

G.8 Recycled water treatment plants

Reported indicators	Indicator number
Number of recycled water treatment plants	A7

Raw data collected

1. Number of recycled water treatment plants. (A7)

Purpose

This indicator provides information on the assets, level of additional treatment and complexity necessary to bring recycled water quality to an acceptable level for the customer. This indicator can also provide an explanation of relative operating and total costs.

Definitions

A7 - Recycled water treatment plant

Any processes required *in addition* to sewage treatment requirements to bring the sewage quality to a level appropriate for recycling to meet the customer needs. If the level required for recycling is equal or less stringent than that required for discharge, ie, no additional treatment is required; this is not included as a recycled water treatment plant.

A recycled water treatment plant takes sewage exclusively for recycling. In the event the treatment plant has a dual purpose (used both as a sewage treatment plant and as a recycled water treatment plant) then predominant use (>50%) should be used to classify the plant to avoid double counting. Predominant usage may change over time due to upgrades or be driven by demand.

There may be more than one additional process step at an individual facility; however, this is treated as one recycling water treatment plant.

Examples

1. Effluent is discharged from a sewage treatment plant into an inland waterway. The level of treatment required is greater than that required for land application of recycled water. All water recycled from the sewage treatment plant is applied to land, hence the sewage treatment plant IS NOT included in the recycled water treatment plant figure as no additional treatment is required.
2. An inland sewage treatment plant treats effluent to a tertiary standard for discharge to an inland waterway. Fifty per cent of the tertiary treated effluent is further processed through a membrane treatment for reuse by an industrial customer. The membrane treatment unit is a recycled water treatment plant.

G.9 Water main breaks

Reported indicators	Indicator number
Water main breaks (per 100 km of water main)	A8

Purpose

To report the number of breaks in potable and non-potable water mains, as a proportion of the total length of water main serviced by the network operator. It is a partial indicator of customer service and the condition of the water main network.

***Note:** The interpretation and definition of 'main breaks' was changed in the National Performance Report 2005-06 and is now similar to WSAA facts 2005, but includes both potable and non-potable water mains. Historical data can be published if in line with this definition.*

Definitions

Total number of water main breaks.

The total number of main breaks, bursts and leaks in all diameter mains for the reporting period.

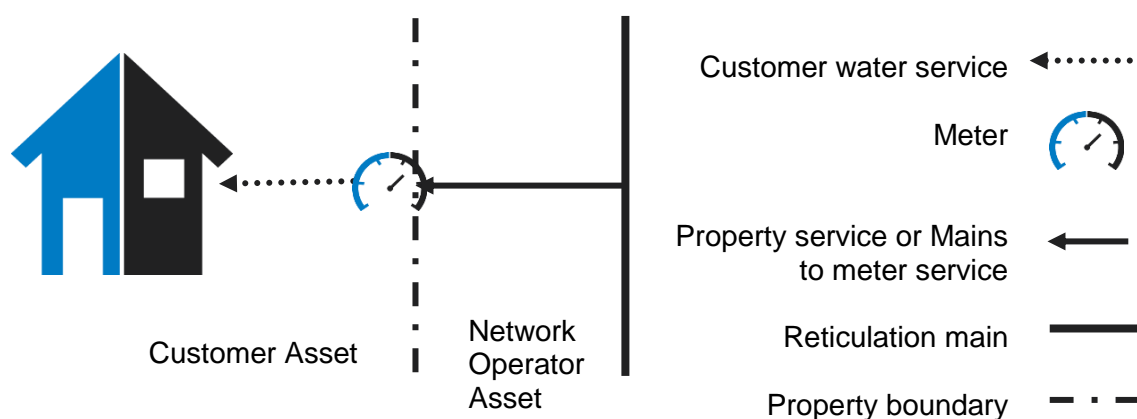
Breaks exclude those in the property service (ie, mains to meter connection) and weeps or seepages associated with above ground mains that can be fixed without shutting down the main.

Note: The "property service" includes any water infrastructure between the water main and the internal plumbing of the property. It may be owned by the network operator, and is often referred to as the "mains to meter" service or connection. All water plumbing downstream of the meter is usually the property owner's asset.

Calculations

A8 - Water main breaks per 100 km of water main =

(Total number of water main breaks) / (Total length of water mains) x 100



G.10 Sewerage breaks and chokes

Reported indicators	Indicator number
Sewerage breaks and chokes (per 100 km of sewer main).	A12
Property connection breaks and chokes (per 100 km of sewer main)	A13

Raw data collected

1. Total number of sewerage breaks and chokes. (A12)
2. Total number of property connection breaks and chokes. (A13)

Purpose

To report the number of sewerage breaks and chokes (A12) in the sewerage system operated by the network operator. It is a partial indicator of customer service and the condition of the sewerage network and may also be used to compare customer service.

Property connection breaks and chokes are a component of indicator A12 but are also reported separately as they may involve different causes and frequency of breaks.

Note: Definition of sewer mains has been updated; historical data may need to be reviewed by some utilities.

Definitions

Choke

A confirmed partial or total blockage that may or may not result in a spill to the external environment from the sewer system.

Breaks or leaks

A break or leak is a failure of the sewer main which results in an interruption to the sewerage service.

A12 - Sewerage breaks and chokes

The sewerage breaks and chokes indicator **includes**:

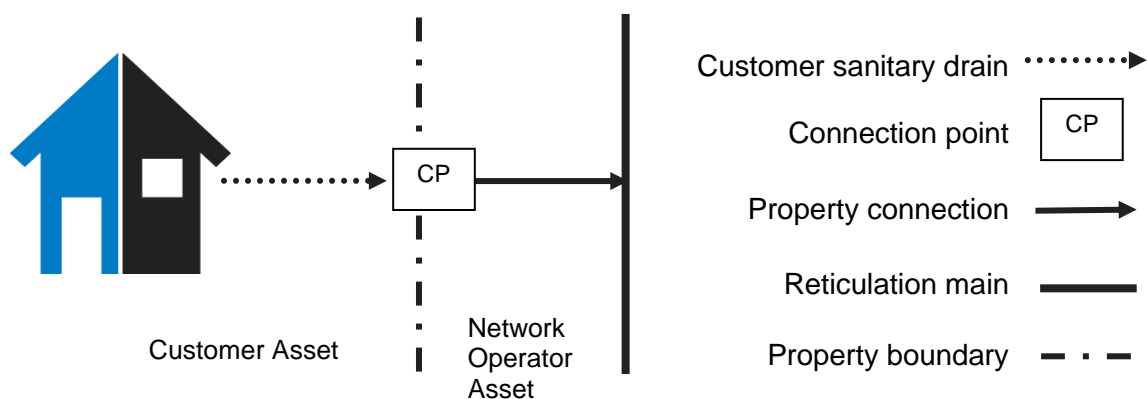
- ▼ All gravity sewer mains.
- ▼ All pressure mains (including common effluent pipelines, rising mains etc).
- ▼ All vacuum system mains of any diameter.
- ▼ Property connection sewers.

This **excludes**:

- ▼ Pipelines carrying treated effluent.
- ▼ Recycled water distribution and reticulation mains delivering water for urban areas; such mains are to be reported as water mains (Indicator A2).

A13 - Property connection breaks and chokes

The property connection is a short sewer owned and operated by the sewerage agency, which connects the sewer main and the customer sanitary drain. It includes a junction on the sewer main, a property connection fitting, a vertical riser (in some cases) and sufficient straight pipes to ensure the property connection fitting is within the lot to be serviced (refer to the *WSAA 02 Sewerage Code of Australia*).



Units

Per 100 km.

Calculations

A12 - Sewerage breaks and chokes (per 100 km of sewer main) =

$$\text{Total number of sewerage breaks and chokes} / (\text{Total length of sewer main (km)} / 100)$$

A13 - Property connection breaks and chokes (per 100 km sewer main) =

$$\text{Total number of property connection breaks and chokes} / (\text{Total length of sewer main (km)} / 100)$$

Note: A13 is a component of A12 (ie, A12 includes property connection breaks and chokes).

G.11 Average duration of unplanned water supply interruptions

Reported indicators	Indicator number
Average duration of an unplanned interruption - water (minutes).	C15
Average duration of planned interruption – water (minutes)	WICA#6
Average duration of unplanned interruption – potable water (minutes)	WICA#7
Average duration of planned interruption – potable water (minutes)	WICA#8
Average duration of unplanned interruption – non-potable water (minutes)	WICA#9
Average duration of planned interruption – non-potable water (minutes)	WICA#10

Raw data collected

1. Average duration of an unplanned water supply interruption (min). (C15)
2. Average duration of a planned water supply interruption (min). (WICA#6)
3. Average duration of unplanned potable water supply interruption (min). (WICA#7)
4. Average duration of planned potable water supply interruption (min). (WICA#8)
5. Average duration of unplanned non-potable water supply interruption (min). (WICA#9)
6. Average duration of planned non-potable water supply interruption (min). (WICA#10)

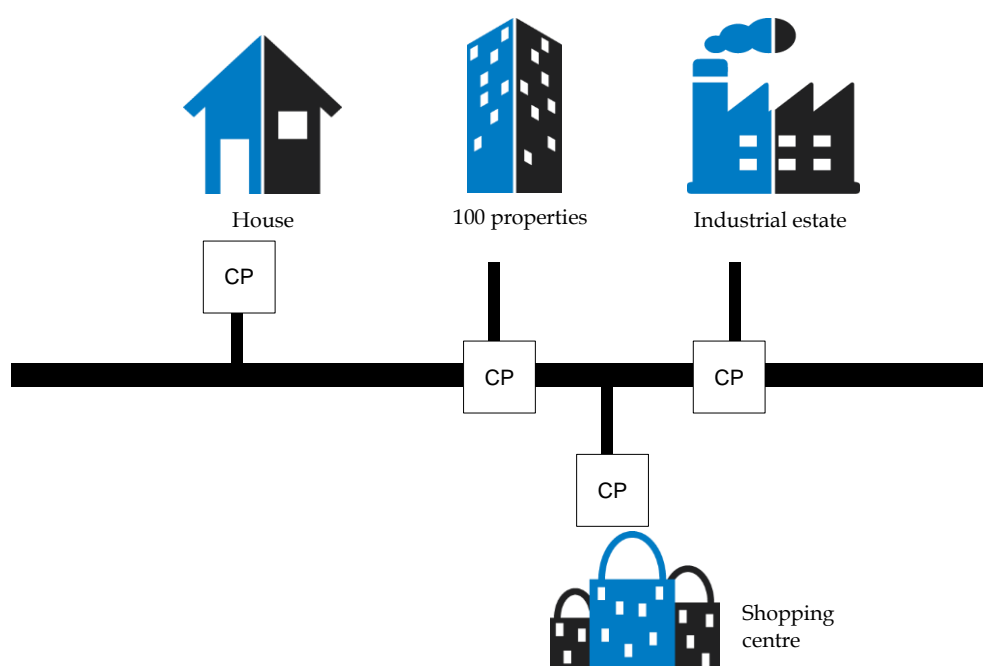
Purpose

To report average duration a connection point is without a water supply for the reporting period. It is a partial indicator of the condition of the water network, and how effectively the operation of the network is being managed (eg, whether operating pressures are too high).

Definitions

Connection point

A connection point (CP) is the physical connection between one network operator and another network operator (can be a private or a public utility) or a network operator and a retail supplier (can be a private or a public utility). The physical connection point may supply individual or multiple properties.



Water supply interruption (connection points)

A water supply interruption is any event causing a total loss of water supply due to any cause. Interruptions **do not include**:

- ▼ Those caused by bursts or leaks in the property service (mains to meter connection), unless the property connections are owned or maintained by the water utility or the burst or leak requires the mains to be shut down for repair.
- ▼ In the case of a utility that has contracted with the connection point to provide an interrupted supply (eg, at peak demand periods), those interruptions that are in accordance with the levels of service specified in the contract.

Unplanned water supply interruption

This is when the connection point has **NOT** received at least 24 hours notification (or as otherwise prescribed by regulatory requirements) of the interruption. It also includes situations where the duration of a planned interruption exceeds that which was originally notified. In this circumstance, the length of the entire interruption is counted (see example 1). All un-notified interruptions caused by third parties should be included.

Unplanned potable water supply interruption

As above, but in relation to potable water only.

Unplanned non-potable water supply interruption

As above, but in relation to non-potable water only.

Planned water supply interruption

This is when the connection point has received at least 24 hours notification (or as otherwise prescribed by regulatory requirements) of the interruption and the duration of the planned interruption does not exceed that which was originally notified.

Planned potable water supply interruption

As above, but in relation to potable water only.

Planned non-potable water supply interruption

As above, but in relation to non-potable water only.

a) Duration of an unplanned water supply interruption.

An interruption commences when the water utility is aware that 'water is no longer available at the connection point' and ceases 'when normal service is restored' (OFWAT Return Reporting Requirements) ie, when the last valve has been opened (see examples 2 and 3).

Where the utility is aware of a water supply interruption via internal systems alarms, the duration commences when the alarm is raised.

If a connection point notifies the water utility they are without water, the duration commences at the time of notification. If the water utility is responding to a notification of a broken main, unless this notification also indicates a loss of supply, the duration commences once the break is isolated (if repairs are not being done under pressure).

Duration of an unplanned potable water supply interruption

Same as above, but in relation to potable water only.

Duration of an unplanned non-potable water supply interruption

Same as above, but in relation to non-potable water only.

Duration of a planned water supply interruption

An interruption commences when the water utility ceases to supply water to the connection point in accordance with its notification, and ceases 'when "normal" service is restored' (OFWAT Return Reporting Requirements) ie, when the last valve has been opened, on or before the period which was originally notified.

Duration of a planned potable water supply interruption

Same as above, but in relation to potable water only.

Duration of a planned non-potable water supply interruption

Same as above, but in relation to non-potable water only.

Average duration of an unplanned water supply interruption

The average duration for which a connection point is without supply due to an unplanned interruption.

Average duration of an unplanned potable water supply interruption

The average duration for which a connection point is without supply due to an unplanned interruption.

Average duration of an unplanned non-potable water supply interruption

The average duration for which a connection point is without supply due to an unplanned interruption.

Average duration of a planned water supply interruption

The average duration for which a connection point is without supply due to a planned interruption.

Average duration of a planned potable water supply interruption

The average duration for which a connection point is without supply due to a planned interruption.

Average duration of a planned non-potable water supply interruption

The average duration for which a connection point is without supply due to a planned interruption.

Units

Minutes (min).

Calculations

C15 - Average duration of an unplanned water supply interruption =

Total minutes off water supply/ total number of connection points affected

WICA#6 - Average duration of an unplanned potable water supply interruption =

Total minutes off potable water supply/ total number of connection points affected

WICA#7 - Average duration of an unplanned non-potable water supply interruption =

Total minutes off non-potable water supply/ total number of connection points affected

WICA#8 - Average duration of a planned water supply interruption =

Total minutes off water supply/ total number of connection points affected

WICA#9 - Average duration of a planned potable water supply interruption =

Total minutes off potable water supply/ total number of connection points affected

WICA#10 - Average duration of a planned non-potable water supply interruption =

Total minutes off non-potable water supply/ total number of connection points affected

(see example table below)

Examples

1. A connection point calls the water utility advising that they have no water. The interruption commences at the time the call is received.
2. A connection point calls the water utility advising of a broken main. The interruption commences when staff arrive at the main and isolate the main break.
3. Mains are shut down due to fire fighting requirements. This interruption is included and commences at the time the mains are shut down.
4. See table below for example of calculation – substitute “connection points” wherever the word “customers” appears in the table below.

Interruption	Minutes of interruption	Number of customers affected	Minutes off supply (ie, Minutes interruption x number of customers affected)	Average duration of an unplanned interruption (minutes)
A	240	20	4,800	(ie, Total Minutes off supply / Number of Customers affected)
B	300	1,000	300,000	
C	120	400	48,000	
D	60	2	120	
E	410	35	14,350	
Total		1,457	367,270	252.1

G.12 Average sewerage interruption

Reported indicators	Indicator number
Average sewerage interruption (minutes)	C16

Raw data collected

1. Average sewerage interruption (mins). (C16)

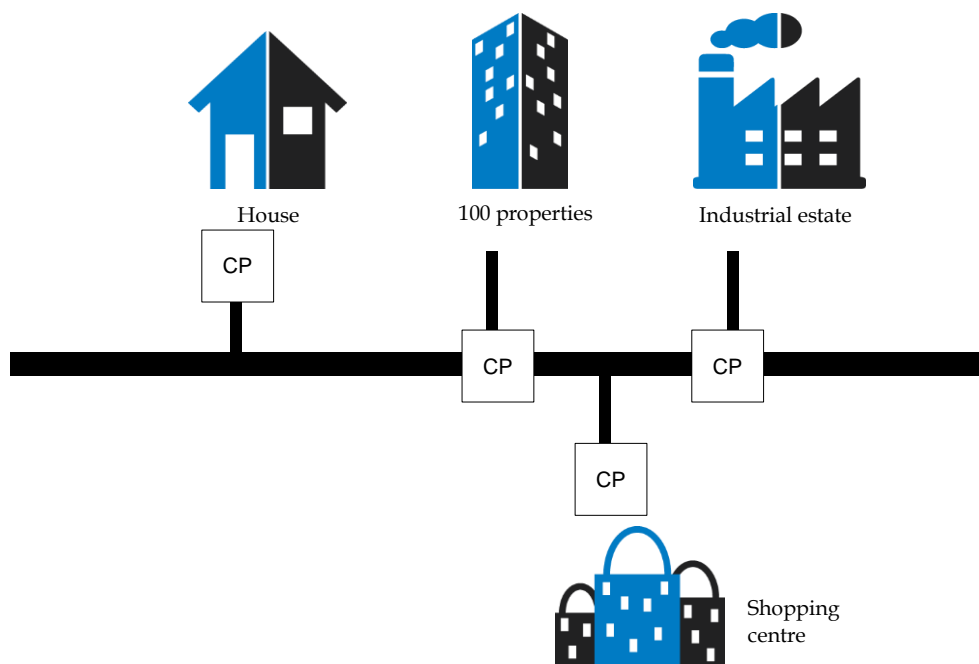
Purpose

To report for how long, on average, a connection point is without sewerage services for the reporting period. It is a partial indicator of the condition of the sewerage network.

Definitions

Connection point

A connection point (CP) is the physical connection between one network operator and another network operator (can be a private or a public utility) or a network operator and a retail supplier (can be a private or a public utility). The physical connection point may supply individual or multiple properties.



Sewerage interruption

A sewerage interruption is any event causing a significant reduction of sewerage service due to any cause. Interruptions **exclude** those caused by breaks or chokes in the property connection sewer.

Unplanned sewerage service interruption

This is when the connection point has **NOT** received at least 24 hours notification of the interruption (or as otherwise prescribed by regulatory requirements). It also includes situations where the duration of a planned interruption exceeds that which was originally notified. In this circumstance, the length of the entire interruption is counted. All un-notified interruptions caused by third parties should be included.

Duration of an unplanned sewerage service interruption

An interruption commences when the water utility is aware that sewerage services are no longer available and ceases when 'normal' service is restored.

Average sewerage interruption

The average duration for which a connection point is without a sewerage service due to unplanned work.

Units

Minutes (min).

Calculations

C16 - Average sewerage interruption (minutes) =

Total minutes of interruptions / total number of interruptions

Example:

Interruption	Minutes of Interruption
A	240
B	300
C	50
D	70
E	90
Total interruptions = 5	Total minutes of interruption = 750

Average sewerage interruption = 150 minutes

G.13 Connection point interruption frequency

Reported indicators	Indicator number
Average frequency of unplanned interruptions – water	C17
Average frequency of planned interruptions – water	WICA#11
Average frequency of unplanned interruptions – potable water	WICA#12
Average frequency of planned interruptions – potable water	WICA#13
Average frequency of unplanned interruptions – non-potable water	WICA#14
Average frequency of planned interruptions – non-potable water	WICA#15

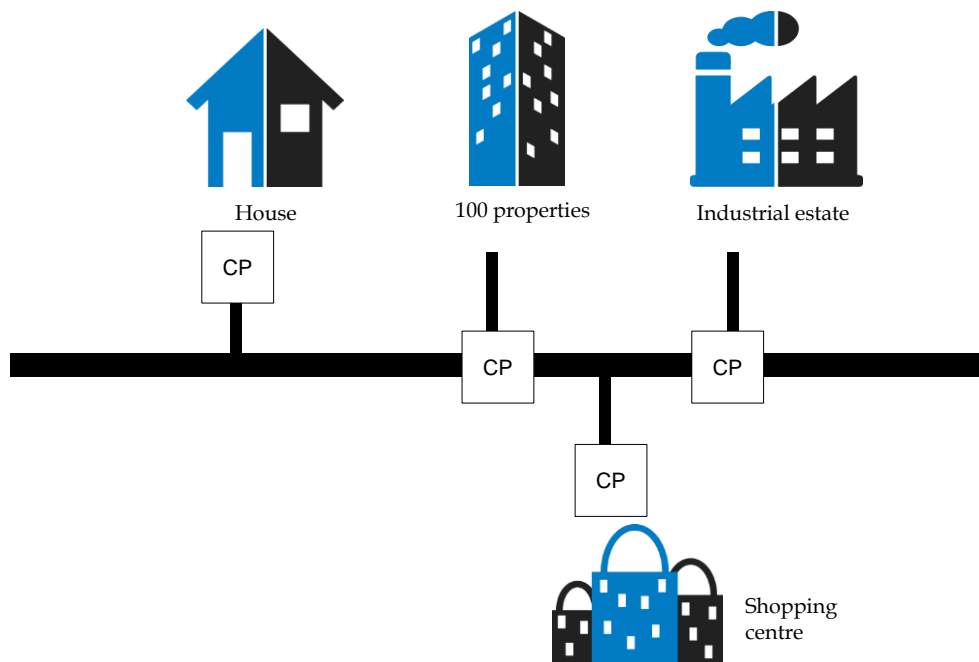
Purpose

To report how frequently connection points are without access to the water supply service. It is a partial indicator of service quality and reliability.

Definitions

Connection point

A connection point (CP) is the physical connection between one network operator and another network operator (can be a private or a public utility) or a network operator and a retail supplier (can be a private or a public utility). The physical connection point may supply individual or multiple properties.



Average frequency of unplanned interruptions

Average connection point-interruption frequency.

A water supply connection point-interruption is a loss of water supply to an individual connection point due to an unplanned water supply interruption. For example, a water supply interruption which causes loss of supply to 100 connection points is 100 connection point-interruptions.

Includes:

- ▼ Each occurrence of unplanned interruptions to supply.

Excludes:

- ▼ Mains to meter interruptions unless the burst or leak requires the mains to be shut down for repair.

- ▼ Some reduction to the level of service but where normal activities (shower, washing machine, toilet flushing etc) are still possible, breaks in house connection branches or planned interruptions.

Interruption: Where the connection point is without a service due to any cause.

Unplanned Interruption: An interruption caused by a fault in the utility's system.

Planned Interruption: An interruption for which the utility has provided at least 24 hours advanced notification (or as otherwise prescribed by regulatory requirements or in accordance with the levels of service specified in the contract with the connection point).

Calculations

C17 - Average frequency of unplanned interruptions (per connection point) =

Total number of unplanned interruptions / Total number of water connection points

WICA#11 - Average frequency of planned interruptions (per connection point) =

Total number of planned interruptions / Total number of water connection points

WICA#12 - Average frequency of unplanned interruptions – potable water (per connection points) =

Total number of unplanned interruptions – potable water only / Total number of potable water connection points

WICA#13 - Average frequency of planned interruptions – potable water (per connection points) =

Total number of planned interruptions – potable water only / Total number of potable water connection points

WICA#14 - Average frequency of unplanned interruptions – non-potable water (per connection points) =

Total number of unplanned interruptions – non-potable water only / Total number of non-potable water connection points

WICA#15 - Average frequency of planned interruptions – non-potable water (per connection points) =

Total number of planned interruptions – non-potable water only / Total number of non-potable water connection points

G.14 Connection point interruption frequency - sewerage

Reported indicators	Indicator number
Average frequency of unplanned interruptions – sewerage	WICA#16

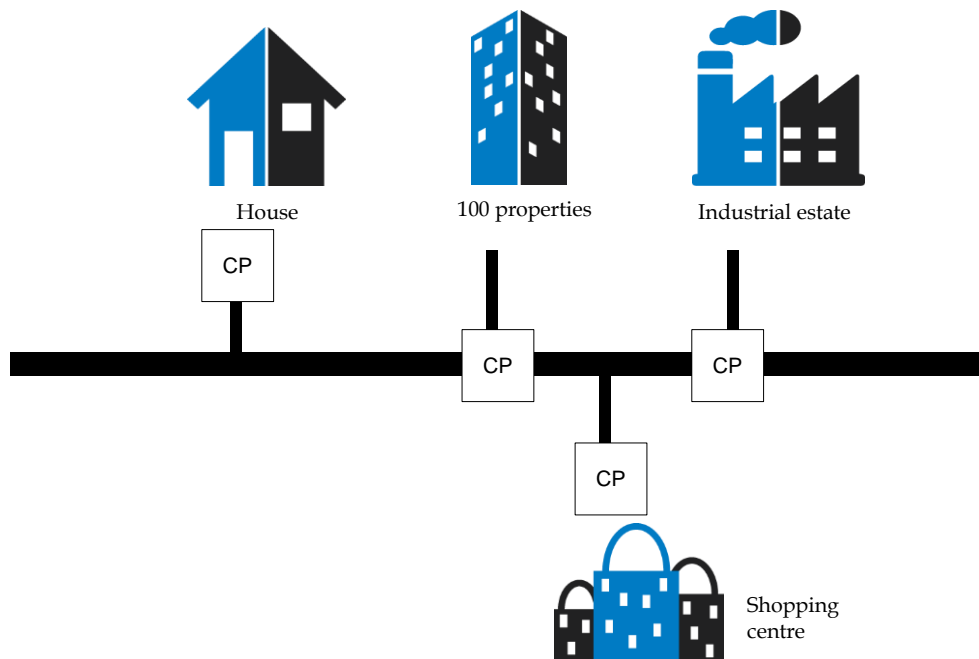
Purpose

To report how frequently connection points are without access to the sewerage service. It is a partial indicator of service quality and reliability.

Definitions

Connection point

A connection point (CP) is the physical connection between one network operator and another network operator (can be a private or a public utility) or a network operator and a retail supplier (can be a private or a public utility). The physical connection point may supply individual or multiple properties.



Average frequency of unplanned interruptions

Average connection point-interruption frequency.

A sewerage services connection point-interruption is a loss of sewerage services to an individual connection point due to an unplanned sewerage service interruption. For example, a sewerage service interruption which causes loss of services to 10 connection points is 10 connection point-interruptions.

Includes:

- ▼ Each occurrence of unplanned interruptions to the service.

Excludes:

- ▼ Some reduction to the level of service but where normal activities (toilet flushing etc) are still possible, breaks in house connection branches or planned interruptions.

Interruption: Where the connection point is without a service due to any cause.

Unplanned Interruption: An interruption caused by a fault in the utility's system.

Planned Interruption: An interruption for which the utility has provided at least 24 hours advanced notification (or as otherwise prescribed by regulatory requirements).

Calculations

WICA#16 - Average frequency of unplanned interruptions (per connection point)
=

Total number of unplanned interruptions / Total number of sewer connection points

G.15 Sewage treatment plant compliance

Reported indicators	Indicator number
Per cent of sewage volume treated that was compliant (%)	E4

Raw data collected

1. Per cent of sewage volume treated that was compliant (%)

Purpose

Reporting of sewage treatment plant compliance against the Licence limits demonstrates the water utility's ongoing commitment to protection of the environment to which the treatment plant discharges.

Sewage treatment plants are generally licensed to ensure that effluent discharges are compatible with receiving waterways or land based reuse. Three approaches are used by environmental regulators in regard to the setting of Licence limits. These take into account:

- ✓ potential toxicity of effluent contaminants
- ✓ the overall environmental load and the capacity of the receiving environment to accept additional loads of nutrients, and
- ✓ treatment plant performance (operating practices).

Toxicity is generally addressed by setting definitive maximum limits.

Load limits are generally set for a period of time and often relate to particular nutrients. These limits may be to prevent eutrophication in receiving waters. In this case percentile and median limits are often applied.

Regulators also apply percentile limits to take into account the variability of operation of a sewage treatment plant and their expectations of treatment plant performance.

Definitions

Sewage treatment plant compliance

The sewage treatment plant compliance is the number of scheduled samples that complied in the reporting period divided by the total number of scheduled samples in the reporting period (see examples 1, 2 and 3).

The sampling schedule is that specified in the utility's Licence.

Units

Megalitres (ML), per cent (%).

Calculations

E4 - Sewage treatment plant compliance per reporting period (%) =

(No. of scheduled samples complying with Licence limits) / Total No. of scheduled samples in reporting period)

Note: Where the Licence limit specifies a 90th percentile limit for the treatment plant for the reporting period and the number of samples complying divided by the total number of scheduled samples is greater than 90%, then as compliance for that treatment plant is greater than the Licence limit, compliance is deemed to be 100%.

Compliance for a utility with more than one treatment plant is calculated as the weighted average of sewage treated at all treatment plants that complied per reporting period =

$$(STP1 \text{ compliance} \times \text{volume treated} + STP2 \text{ compliance} \times \text{volume treated} + \dots) / \text{Total volume treated for all treatment plants in reporting period}$$

Examples

1. Treatment plant A

For treatment plant (A), the sewage treatment plant Licence specifies routine sampling at twice per month over a 12-month period and specifies a 90th percentile limit for the year.

Of the 24 samples taken over the 12-month period, three exceed the 90th percentile limit. The compliance for treatment plant (A) is therefore 21/24 ie, compliance is 87.5%.

2. Treatment plant B

For treatment plant (B), the sewage treatment plant Licence specifies routine sampling at twice per month over a 12-month period and specifies a 90th percentile limit for the year.

Of the 24 samples taken over the 12-month period, one exceeds the limit (ie, 96% of samples comply). The compliance for treatment plant (B) is therefore 100% as it meets the 90th percentile limit for the 12-month period.

3. Treatment plant C

For treatment plant (C), the sewage treatment plant Licence specifies routine sampling at once per month and specifies a maximum limit for any scheduled sample taken over the 12-month period.

Of the 12 samples taken over the 12-month period, one exceeds the maximum limit for the parameter. Treatment plant (C) is therefore compliant for 11/12 months ie, compliance is 92%.

4. Limits for separable sections of the treatment plant specified in Licence

Where the Licence specifies limits for separable sections of the treatment plant, the following approach should be adopted:

Sample 'y' is non-compliant and was taken from a separable section of the treatment plant. In this case, a reasonable estimate of the affected volume of sewage should be made, with assumptions documented for the purposes of auditing.

5. Utility with two treatment plants

A utility has two treatment plants (STP-B) and (STP-C).

The Licence for STP-B specifies a 90th percentile limit for the 12-month period. Over this period, STP-B treated a volume of 1000 ML for which 11 samples out of 12 (ie, 96%) complied. Therefore, the compliance for STP-B is 100% as it meets the 90th percentile limit under the Licence conditions.

The Licence for STP-C specifies a maximum limit for any scheduled sample taken over the 12-month period. STP-C treated a volume of 3000 ML for which 11 out of 12 samples complied (ie, 92%). Therefore, the compliance for STP-C is 92%.

For this utility, compliance for the 12-month period is calculated as the weighted average of the percentage of sewage treated that was compliant for each treatment plant. This is calculated for this utility as follows:

$$\text{Compliance} = (100\% \times 1000\text{ML} + 92\% \times 3000\text{ML}) / (1000\text{ML} + 3000\text{ML}) = 94\%$$

G.16 Number of sewage treatment plants compliant at all times

Reported indicators	Indicator number
Number of sewage treatment plants compliant at all times	E5

Purpose

To report on the number of sewage treatment plants which were compliant with the Licence conditions related to sewage treatment plant effluent at all times during the reporting period. This gives an indication of the overall performance of the utility's sewage treatment and, if problems exist, whether they are localised or widespread. This indicator, together with NWI indicators C2, E4, E6 and E7 provides information on how well the utility is managing its treatment facilities.

Definitions

Sewage treatment plants

Refer to sewerage assets. Note: BOOT schemes should be included.

Compliance

Compliance is where the sewage treatment works effluent meets the Licence condition prescribed by the environmental regulator. A breach is where the sewage treatment works effluent does not meet such standards or where a financial (greater than \$10,000 per incident) or other penalty has been imposed or

where the business has had any successful litigation against it by the environmental regulator.

Units

Number of sewage treatment plants compliant at all times as a ratio of total number of sewage treatment plants (indicator A4) eg, '5 of 6'.

G.17 Compliance with environmental regulator – sewerage

Reported indicators	Indicator number
Compliance with environmental regulator – sewerage (yes/no)	E7
Brief explanation if no	

Raw data collected

1. Compliance with environmental regulator – sewerage (yes/no). (E7)
2. Brief explanation if no.

Purpose

To report whether the compliance requirements of the environmental regulator were met for the entire sewerage system.

Definitions

Sewerage System

Includes the collection, conveyance and treatment of wastewater and the disposal of treated effluent.

Compliance

Compliance is where the utility meets the Licence conditions prescribed by the environmental regulator. A breach is where the utility does not meet such standards, or has received a financial (greater than \$10,000 per incident) or other penalty, or had any successful litigation against it by the environmental regulator (or equivalent) or its representative.

Examples

1. Infringements that may not result in a breach include (subject to state regulation); losing a sample or reporting a sample late.

- Infringements that result in a breach may include (subject to state regulation); a spill or discharge contrary to regulatory limits.

The water utility may provide a brief summary to detail any breach. The actual incident may have occurred in a previous financial year to the penalty.

Units

Yes/No.

G.18 Biosolids reuse

Reported indicators	Indicator number
Per cent of biosolids reused	E8

Raw data collected

- Per cent of biosolids reused. (E8)

Purpose

To report on the level of reuse of biosolids.

Definitions

Biosolids

The stabilised organic solids derived from sewage treatment processes.

Biosolids reuse

Reuse involves managing biosolids safely and sustainably to beneficially utilise their nutrient, energy, or other values. This may include biosolids beneficially used for agriculture (eg, fertiliser), soil conditioning, mine rehabilitation, and other applications recognised as reuse.

The dry weight of biosolids reused may be greater than the dry weight of biosolids produced if the business is also reusing existing stockpiles.

Total dry weight tonnes of biosolids produced

For mechanical or other sewage treatment processes where the biosolids are available for reuse within a short time frame (eg, less than one month) the volumes produced for the financial year should be included.

For sewage treatment processes where the biosolids are **NOT** available for reuse within a short time frame (eg, lagoon processes of 10-30 years) the water utility should account for the accumulation of solids over a financial year. It is suggested that the volume accumulated be calculated using one of the following methodologies:

- a) Using appropriate sampling techniques, determine the volume of solids entering the lagoon process (or equivalent) per annum. After accounting for those solids consumed due to biological activity, determine the total accumulation of solids for the financial year.
- b) Assess the existing depth of accumulated solids in all lagoons to determine an average annual rate of accumulation. This average figure should then be used.

Units

Per cent (%).

Calculations

E8 - Per cent of biosolids reused =

(Total dry weight tonnes of biosolids reused / Total dry weight tonnes of biosolids produced) x 100

G.19 Sewer overflows

Reported indicators	Indicator number
Sewer overflows reported to environmental regulator (per 100km of sewer main)	E13

Raw data collected

1. Number of sewer overflows reported to environmental regulator.
2. Length of sewer main.

Purpose

To report sewer overflows which have been reported to the environmental regulator.

The number of overflows may be used as a partial indicator of the condition of the sewerage network, as an indication of how effectively the network is being managed and may also be used to compare customer service.

It is acknowledged that different states/territories may have different Licence agreements and varying reporting requirements to their environmental regulator, therefore sewer overflows reported to environmental regulator may not be directly comparable across jurisdictions.

Definitions

Number of sewer overflows reported to environmental regulator

When untreated sewage spills or discharges and escapes from the sewerage system (ie, pumping stations, pipes, maintenance holes or designed overflow structures) to the external environment, and is required to be reported to the environmental regulator as per the utility's Licence.

Overflows are those caused by system faults originating in the system under the water utility's responsibility.

This includes:

- ✓ Property service connections that are owned or maintained by the utility.

This does **NOT** include:

- ✗ Spills that are not reported to the environmental regulator.
- ✗ Spills, discharges or overflows contained within emergency storages where no pollution of the environment occurs eg, an emergency storage tunnel.

External environment

External environment is the area surrounding the infrastructure (eg, pump station) from which a spill occurs, regardless of whether the external environment is owned by the water utility. An overflow structure from which a spill does not escape is not in the external environment.

Calculations

E13 - Number of sewer overflows reported to environmental regulator per 100km of sewer main =

Total number of sewer overflows reported to environmental regulator / (Total length of sewer mains / 100)

G.20 Water quality compliance

Reported indicators	Indicator number
Number of zones where microbiological compliance was achieved (eg, 23/24)	H2
% of population where microbiological compliance was achieved	H3
Number of zones where chemical compliance was achieved (eg, 23 / 24)	H4

Raw data collected

1. Microbiological verification achieved in zones (eg, 23/24). (H2)
2. Microbiological verification (% population compliant). (H3)
3. Health related chemical / radiological verification achieved (eg, 23/24). (H4)

Purpose

To report on the number of water treatment plants which were compliant with the Water Quality Plan required under a Licence granted under the *Water Industry Competition Act 2006*. This gives an indication of the overall performance of the utility's water treatment and, if problems exist, whether they are localised or widespread. NWI indicators H2, H3 and H4 provide information on how well the utility is managing its water treatment facilities.

Water quality systems and the guidelines or standards to which a water utility is required to report compliance may significantly influence the level of capital investment and operating costs.

Definitions

Number of zones where Microbiological Compliance achieved

Assessment with the microbiological requirements of the water quality guidelines/standard in each zone of the water supply system. For example, report as 9/11.

Percentage population served where microbiological compliance was achieved

Similar criterion to NWI H2 above, but based on the percentage of the total population served being within the complying zones - eg, 95%.

Health-related chemical compliance achieved

Verification assessment with health related parameters of the water quality guideline/standard for each zone of the water supply system.

Water supply system and water supply zones

A water supply zone will generally be defined by each water business using criteria such as:

- ▼ A discrete area of similar water quality, eg, served by one water treatment plant.
- ▼ An area able to be described by its boundaries.
- ▼ The nature and design of the water supply system (including the location of service reservoirs, pump stations, tanks, and trunk systems etc).
- ▼ The source and nature of the source of the drinking supply.
- ▼ The treatment components of the supply system.
- ▼ the Water Quality Plan required under a Licence granted under the *Water Industry Competition Act 2006*.

Units

For microbiological verification state the number of zones where the defined criteria have been achieved (eg, 23/24).

For health-related chemical/radiological verification state the number of zones where the defined criteria have been achieved (eg, 23/24).

Calculations

Generally the methodology for calculating microbiological and health related chemical/radiological criteria used for determining compliance is specified by the health regulator in each jurisdiction and if so, this should be used.

In the absence of such specification, the guidance in the Water Quality Plan required under a Licence granted under the *Water Industry Competition Act 2006* (which must address and implement the 12 elements of the framework for the management of drinking water quality detailed in the *Australian Drinking Water Guidelines* or for the management of recycled water in the *Australian Guidelines for Water Recycling*, as appropriate).

The guidance in the *Australian Drinking Water Guidelines (2004)* should be used as interpreted below:

Microbiological compliance

For each zone, at least 98% of routinely monitored samples contain no *E.coli*¹⁸ per 100 ML of water over the 12-month period.

Note: The *Australian Drinking Water Guidelines (2004)* use *E.coli* as the indicator of faecal contamination and for utilities using these guidelines for verification of performance, *E.coli* is the required assessment indicator. Total coliforms were removed as an indicator of faecal contamination in the 2004 guidelines; however some water businesses may still have requirements for verification of water quality using the combination of total coliforms and *E.coli*. If this is the case, compliance against total coliforms and *E.coli* should be reported.

Health-related physical or chemical compliance

It is neither physically nor economically feasible to test on an ongoing basis for all substances in a water supply system. Each water supply system will have its own key characteristics and based on carrying out a risk assessment of those characteristics, a routine monitoring program for these characteristics will be determined.

It is therefore common for water businesses to monitor regularly for contaminants such as disinfection by-products whereas a wide range of other non key characteristics will only be monitored irregularly - or when changes in the supply system (eg, seasonal) warrant increased routine monitoring frequency.

Some chemical parameters are likely to be monitored in each zone, while others may be monitored in source or treated waters supplying a number of zones.

Chemical contaminants in a water supply system are generally a chronic issue – with ingestion above a guideline value for long time periods required before harm is caused. *Australian Drinking Water Guidelines (2004)* therefore suggest that for health related parameters ‘each excursion beyond a guideline value should be a trigger for further action¹⁹’ – and this generally means more extensive sampling to confirm contaminant levels above the guideline level. While the ADWG is not definitive they also state that ‘for all health related characteristics, a reasonable objective is to be confident that the 95th percentile of results over the preceding 12 months should be less than the guideline value.’ This means that the upper bound of the 95th confidence interval for the percentile should be less than the guideline value²⁰.

For very regularly (minimum 30 data points) monitored data, the upper bound of the 95th percentile approximates the 95th percentile value and takes into account an occasional excursion above the guideline value (which could be due to sampling error, laboratory error etc). For contaminants where 30 data points are available, WSAA is therefore adopting the 95th percentile value of a series of monitoring

¹⁸ The 2004 ADWG use the indicator *E.coli* interchangeably with Thermotolerant Coliforms.

¹⁹ Section 6.3.4, *Australian Drinking Water Guidelines 2004*.

²⁰ Section 10.7.1, *Australian Drinking Water Guidelines 2004*.

assessments for assessment of verification against the *Australian Drinking Water Guidelines (2004)* level.

The less the parameter is monitored, the greater the statistically uncertainty of the upper bound number. For irregularly monitored data points (eg, <30 per year), the upper bound of the 95th percentile may be considerably higher than the maximum reading detected. If this system is used, this may result in water businesses publicly reporting exceedances of guideline levels when no monitored sample value exceeds the guideline limit, and would be very difficult to explain to the public. There are further uncertainties in using this mechanism for assessment as some of the assumptions about the underlying statistical principles (normality of data etc.) may not hold and the mechanisms for deriving most guideline values use assumptions that also have significant error in their estimation.

For these reasons, for irregularly monitored data points, the maximum value of the data should be used for assessment against the guideline value.

In summary, for health-related chemical/radiological parameters:

- For contaminants sampled 30 or greater times during the year, the 95th percentile reading of each health related monitored physical-chemical parameter should be used for assessments against *Australian Drinking Water Guidelines (2004)* guideline levels.
- For contaminants sampled less than 30 times during the year, the maximum reading should be used for assessment of each health related monitored physical-chemical parameter against *Australian Drinking Water Guidelines (2004)* guideline levels.
- In some jurisdictions health regulatory agencies will specify to the utility the performance requirements necessary. If this is the case, this should be used rather than the ADWG guidance (the performance requirements must be footnoted in the report).
- These should be assessed across each zone in a system and reported as the fraction of zones meeting requirements (eg, 23/24).

Examples

1. Water quality standards include National Health and Medical Research Council (NHMRC) 1987, *Australian Drinking Water Guidelines (ADWG) 1996*, *Australian Drinking Water Guidelines (ADWG) 2004* and World Health Organisation (WHO) 1984.
2. Approved quality systems include Hazard Analysis and Critical Control Point (HACCP), ISO9001 and The WSAA *National Water Quality Framework Continuous Improvement Tool*.
3. Evaluation of disinfection by-product data (12 THM readings in 12 months in ug/L) (295, 250, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200).

As there are less than 30 readings, the maximum value is taken which is 295 ug/L. As 295 ug/L exceeds the *Australian Drinking Water Guidelines (2004)* limit of 250 ug/L. This sample set would be assessed as non compliant.

4. Evaluation of disinfection by-product data (32 THM readings in 12 months in ug/L) (295, 250, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200).

As there are greater than 30 readings in the 12-month period, the 95th percentile is taken which is 234 ug/L. As this 234 ug/L does not exceed the ADWG limit of 250 ug/L, this sample set would be assessed as compliant.

5. Evaluation of a system with 30 zones shows that there is a failure of THM's in two zones and a failure of selenium in a source water supplying six zones (one of which overlaps with the zone failing THM's), making a total of seven zones failing (five zone with THM's only, one zone with selenium only and one zone failing both THM's and Selenium).

Results would be reported as 23/30 zones meeting requirements.

H Illustrative examples – applicable performance indicators

As noted earlier in this reporting manual, IPART will determine the indicators that are applicable to a particular Licensee, in consultation with the Licensee. The Licensee will be notified by IPART of the applicable performance indicators at the time of being granted the Licence (and subsequently, if there are any significant changes to the activities undertaken).

The following are illustrative examples to assist Licensees to understand which performance indicators are likely to be applicable to their particular licensed activities.

Example 1: Network Operator's Licence for a golf course to recycle sewage via sewer mining to use on-site to irrigate golfing greens

Such an activity would involve the collection of sewage from a sewer (NWI W18); the use of recycled water on-site (NWI W24); and the infrastructure would be likely to include sewerage mains, water mains and treatment plants (so the 'infrastructure' set of indicators and related 'infrastructure performance' and 'service interruptions' indicators would be applicable). Such systems are also likely to have environmental and water quality issues requiring monitoring, so the 'environmental' and 'water quality' indicators are also likely to be applicable.

Indicators in relation to 'sources of water' would not apply, as 'sewage' does not come within the definition of 'water'. There is potential for some doubling-up in reporting under the indicators, for example the total volume of water (which includes potable and non-potable water) could be the same as the total volume of recycled water supplied, or where all recycled water is used on-site, there would be a double-up between reporting the volume supplied on-site (NWI W24) and the total volume supplied (NWI W26). In such a case, IPART is likely to indicate to the Licensee that reporting is only necessary in relation to the most appropriate indicator or indicators (eg, NWI W24).

Example 2: Bundled Network Operator and Retail Supplier receiving treated effluent from sewage treatment plant to provide recycled water to industrial/commercial customers only

Indicators in relation to ‘sources of water’ and not ‘sewage collected’ would be applicable to such an activity, as the Network Operator is receiving treated effluent (which comes within the definition of ‘water’) and not untreated or raw sewage. The total volume of recycled water supplied indicator (NWI W26) would be applicable, but indicators in relation to the specific volumes of recycled water supplied for industrial or commercial uses would be reported under the Retail Supplier’s Licence. There is potential for some doubling-up in reporting under the indicators, for example the total volume of water supplied (which includes potable and non-potable water)(WICA#2) could be the same as the total volume of recycled water supplied (NWI W26). In such a case, IPART is likely to indicate to the Licensee that reporting is only necessary in relation to the most appropriate indicator or indicators (eg, NWI W26).

The infrastructure would include water mains and treatment plants, so the ‘infrastructure’ set of indicators and related ‘infrastructure performance’ and ‘service interruptions’ indicators would be applicable. Such an activity would also be likely to have water quality issues requiring monitoring, so the ‘water quality’ indicators are also likely to be applicable.

(Note: See Appendix E of the Retail Supplier’s Reporting Manual for an illustrative example of the Retail Supplier indicators likely to be applicable for a bundled Network Operator and Retail Supplier receiving treated effluent to provide recycled water to industrial/commercial customers only.)

Example 3: Network Operator's Licence for a recycled water treatment plant receiving treated effluent from a sewage treatment plant for further treatment and supply to a licensed retail supplier

Indicators in relation to ‘sources of water’ and not ‘sewage collected’ would be applicable to such an activity, as the Network Operator is receiving treated effluent (which comes within the definition of ‘water’) and not untreated or raw sewage. There is potential for some doubling-up in reporting under the indicators, for example the volume of bulk water exports (NWI W14) could be the same as the volume of bulk recycled water exports (NWI W15), and the total volume of water supplied (which includes potable and non-potable water)(WICA#2) could be the same as the total volume of recycled water supplied (NWI W26). In such a case, IPART is likely to indicate to the Licensee that reporting is only necessary in relation to the most appropriate indicator or indicators (eg, NWI W15).

The infrastructure would only include the treatment plant and not the mains used to distribute the recycled water, so the 'infrastructure' set of indicators and related 'service interruptions' indicators would be applicable (but the 'infrastructure performance' indicators would not apply). Such a treatment system is likely to have water quality issues requiring monitoring, so the 'water quality' indicators are also likely to be applicable.

I Insurance expert's report template

It is a standard Licence condition for all Licensees under the Act to obtain appropriate insurance prior to commencing commercial operation of the infrastructure. (See Schedule B, clause B2 of the Licence for full details.)

Licensees must demonstrate that the insurance they have obtained is appropriate. This is established by providing a report to IPART from an insurance expert, certifying that in the insurance expert's opinion, the type and level of insurance obtained is appropriate for the size and nature of the activities authorised under the licence, and attaching all certificates of currency of insurances obtained. The insurance expert must be an insurance broker, holding an Australian financial services licence (AFSL) under Part 7.6 of the *Corporations Act 2001* (Cth) that authorises it to provide financial advice on, and deal in, insurance contracts.

The report must be in the form prescribed by IPART, as set out below. The report should also set out the insurance expert's AFSL number and ABN (or attach a copy of an AFS licence register search from ASIC providing these details). The expert must be able to state in the report that they have no conflicts of interest preventing them from providing the report.

Licensees must submit this report to IPART, prior to commencing commercial operation. This report may take 4 to 6 weeks (or potentially longer) to obtain, as it will require the insurance expert to undertake or review a risk assessment of the licensed activities in order to provide the information required in the report. Licensees should allow for sufficient time to obtain the report before commencing commercial operation (or, for Brownfield schemes that have already commenced commercial operation, within 6 months of the date on which the licence is granted or by a later date specified by IPART (if any)).

Insurance expert's report template

The insurance expert's report required under licence condition B2 is to contain a certification statement with supporting attachments. The below certification statement is to be provided on the insurance broker's letterhead and signed by a Partner, Director or Senior Manager of the brokerage.

[Licensee's name and ACN] (**Licensee**) has engaged [Insurance broker's name, ACN and Australian financial services licence number] to provide this report to the Independent Pricing and Regulatory Tribunal (**IPART**).

This report concerns the Licensee's insurance arrangements in relation to the activities authorised under the Network Operator's licence [insert No.] and/or Retail Supplier's licence [insert No.] (**Licence**) granted to the Licensee under the *Water Industry Competition Act 2006* (NSW) (**Act**). Those activities are [enter a brief description of the authorised activities eg, the construction, operation and maintenance of and/or supply of recycled water from, the recycled water scheme at Rooty Hill]. The provision of this report is required by Licence condition B2.

Licensee's Insurance Arrangements

The attached **Schedule A** sets out:

- ▼ the type and level of insurance obtained by the Licensee in relation to the activities authorised under the Licence (**Licensee's Insurance Arrangements**), and
- ▼ the reasons as to why the Licensee's Insurance Arrangements are appropriate for the size and nature of the activities authorised under the Licence.

Certification

[Insurance broker's name] certifies to IPART that in its opinion, the Licensee's Insurance Arrangements are appropriate for the size and nature of the activities authorised under the Licence. In reaching this opinion, [Insurance broker's name] has:

- ▼ identified and analysed the key risks of the Licensee undertaking the activities authorised by the Licence as set out in the attached **Schedule C**, using the approach or methodology set out in the attached **Schedule B**
- ▼ reviewed the Licensee's Insurance Arrangements, and
- ▼ based on the information set out below:
 - considered whether the Licensee's Insurance Arrangements are appropriate for the size and nature of the activities authorised under the Licence using the risk analysis set out in the attached **Schedule C**, and

- considered any risks that remain wholly or partially uninsured and explained in the attached **Schedule D** what those risks are, why they are wholly or partially uninsured, and why this does not affect the certification given in this report.

In preparing this report, [*Insurance broker's name*] has:

- ▼ been briefed by the Licensee on the activities authorised by the Licence and on the Licensee's Insurance Arrangements
- ▼ reviewed the risk assessment in the following operational plans provided by the Licensee:
 - Network Operator's Water Quality Plan [*delete if not applicable*]
 - Network Operator's Sewage Management Plan [*delete if not applicable*]
 - Network Operator's Infrastructure Operating Plan [*delete if not applicable*]
 - Retail Supplier's Retail Supply Management Plan [*delete if not applicable*]
- ▼ reviewed the risk register developed by the Licensee
- ▼ reviewed evidence of the Licensee's current insurance policies, or of the insurance policies that the Licensee will obtain before commencing commercial operation or supply of services, in the form of certificates of currency (where currently available) and the relevant policy schedules and policy wording. Where an insurance policy is in a foreign language, [*Insurance broker's name*] has reviewed an English translation or English summary of the policy, and
- ▼ [insert details of other information/documents reviewed or any other inquiries made].

Acknowledgments

[*Insurance broker's name*] has prepared this report for the Licensee.

[*Insurance broker's name*] acknowledges that IPART may disclose this report:

- ▼ to the Minister administering the Act (**Minister**) or the Department of Primary Industries (which currently administers the Act on the Minister's behalf), and
- ▼ under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

[*Insurance broker's name*] also acknowledges that this report is for the benefit of the Minister and IPART, and that the Minister and IPART will rely on the report in performing their respective functions under the Act.

[*Include the following section if attaching certificates of currency to this report on behalf of the Licensee*]

Certificates of Currency

All certificates of currency for the insurances are attached in **Schedule E**.

[Insert page break]

SCHEDULE A: Summary of current insurance arrangements

Include a brief statement of the insurance arrangements the licensee has or intends to have in place prior to commencing commercial operation and/or supply of services.

For each insurance policy, the following information is to be summarised:

Policy type/class	<i>(eg, Public & Products Liability, Professional Indemnity, Industrial Special Risks, Environmental Impairment Liability, Workers Compensation, etc)</i>
Parties Insured	<i>[full name of entity to be insured – ensure covers the licensee, particularly where the licensee is a subsidiary company]</i>
Policy number	
Policy period	
Insurer	
Risks/Interests insured	<i>[Summary of what the insurance covers]</i>
Limit of Liability, including notable sub-limits	<i>[eg, \$ amount/s or 'as provided under Legislation']</i>
Key Exclusions	
Policy Extensions	<i>[if applicable]</i>
Geographical Limits	
Evidence of Policy	<i>[ie, Policy Wording & Schedules (or Policy summary/translation where policy issued in another language); Certificate of Currency dated x (where available)]</i>
Appropriateness of Policy	<i>[insert commentary]</i>

[Insert page break]

SCHEDULE B: Risk profiling and analysis approach

Insert details of the approach used to identify and analyse risks. All business risks must be considered, whether insurable or not. The approach used should be consistent with the International Standard ISO 31000-2009, Risk Management – Principles and guidelines, as published by the International Organization for Standardization.

Explain how the risk is evaluated (or rated) and set out your risk evaluation criteria or descriptors in tables below.

[Insert page break]

SCHEDULE C: Insurable risk analysis – key risks

Set out in table form the following:

- ▼ each key risk identified, including a general risk type (eg, Product liability – water; Financial risks; etc) and a more detailed description of the risk or the risk scenario identified (eg, product causing property damage or personal injury; failure of critical equipment; inadequate funds available resulting in licensee's bankruptcy; etc)
- ▼ your assessment or evaluation of the consequences of each key risk, including your risk rating (eg, this will be numbers and/ or descriptors, as described in Schedule B)
- ▼ an indication of whether or not the key risk is insurable or not (eg, yes/no/partially)
- ▼ an indication of what the applicable insurance or insurances for that key risk would be (ie, the policy type)
- ▼ an indication of whether the key risk is in fact insured (eg, yes/no/partially)
- ▼ any further insurance comments on the insurance cover for the risk (eg, extent of the cover) and the appropriateness of that cover (eg, This exposure will be picked up under the property policies of the asset owner; Generally the combined liability policy will provide cover for these risks, except in relation to...; etc)

[Insert page break]

SCHEDULE D: Wholly or partially uninsured risks

For each key risk that is currently wholly or partially uninsured, the following information should be set out in table form:

- ▼ a description of each wholly or partially uninsured risk (eg, Legislative breaches of OH&S, environmental, etc; Asset damage; Inadequate funds available resulting in Licensee's bankruptcy; etc)
- ▼ whether there is an available insurance solution (eg, Yes, No, Partial or an explanatory comment such as: 'A statutory liability policy is available to provide cover for innocent breaches of legislation', etc)
- ▼ comment as to why the risk is wholly or partially uninsured, and why this does not affect the certification given in this report (eg, A commercial decision has been made to self insure these exposures, and it is not considered a material risk exposure with respect to the licensee's project; Responsibility for insurance of the asset rests with the owner of the asset, not the licensee; Such cover is not typically purchased due to the high cost of obtaining such cover and therefore the licensee's insurance arrangements are considered standard industry practice; etc).

[Insert page break]

SCHEDULE E: Certificates of currency

The insurance broker may attach certificates of currency to the report where the insurances are already in place. If the certificates of currency are not attached to the report, the Licensee must separately provide them to IPART before commencing commercial operation or supply of services.

Glossary

WICA	<i>Water Industry Competition Act 2006 (NSW)</i>
WIC (General) Reg	<i>Water Industry Competition (General) Regulation 2008 (NSW)</i>