ESSENTIAL SERVICES COMMISSION

REVIEW OF WATER PERFORMANCE REPORT INDICATORS

FINAL REPORT

AUGUST 2012

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Contents

OVERVIEW

This paper—*Review of Water Performance Report Indicators – Final Report*—states the changes that will take place to the Water Performance Report Indicators in 2012-13 and outlines the next steps of this review process.

This Final Report represents the views expressed by stakeholders—through submissions and the working group—in response to the Discussion paper and the Draft Recommendations

The outcomes of the performance indicator review process have been:

- the removal of 11 indicators
- the modification of eight indicators
- the clarification of 16 indicators
- the addition of five new indicators.

The review process

In April 2012 we released a paper—*Review of Water Performance Report Indicators – Staff Discussion Paper*—with the aim to review and refine the performance indicator framework. The discussion paper asked businesses and other interested parties to consider:

- potential new indicators and categories to reflect changes in technology and the regulatory environment
- the removal of nine existing indicators
- indicators that could be modified to improve relevance and usefulness
- a number of minor amendments and corrections to indicators.

This review focused only on indicators collected by the Commission for our own usage. Although we collect many indicators from water businesses, not all indicators were up for review. The Commission collects data on behalf of other parties, including the National Water Initiative (NWI) indicators for the National Water Commission, and these indicators cannot be changed. During consultation, stakeholders suggested the deletion of some of the NWI indicators, but we are unable to alter them due to our commitments.

Fourteen submissions were received on the Staff Discussion paper and a working group representing the diversity of the sector was formed. The working group met twice to provide additional advice on the development of water performance reporting. A list of submissions received and participants of the working groups are displayed in appendix B.

Although we generated ideas for new indicators to include in the performance report, there was not a great deal of support for them. Many participants wanted fewer indicators rather than additional indicators covering new areas. Some participants supported the idea of adding a new indicator on innovation. In discussions with the working group, this more reflected a desire to see 'innovations' reported in the performance report rather than the development of a stand-alone measure. There was also some support for establishing measures related to partial productivity and tracking actual financial performance against assumptions in price decisions.

In June 2012 we released a follow up paper—*Review of Water Performance Report Indicators – Draft Recommendations Paper*—representing the views expressed through stakeholder submissions and the working group in response to the Staff Discussion paper. Six submissions were received.

The submissions showed support for the process and our recommendations. We also received telephone calls from water businesses voicing their support of our recommendations and agreeing that the changes should be implemented.

We feel that relatively few changes are required because the indicators already closely match the information desired by the public. We commissioned Hall & Partners|Open Mind to undertake a study of customer perceptions of water businesses and identify what aspects of customer service are valued, and what would be useful in a performance reporting framework. Their findings supported the indicators already collected but suggested different presentation techniques for displaying information to customers.

Stakeholders had many opportunities to provide feedback on the indicators as well as on the review process. All feedback has been used to determine our final indicator set.

For more information on our previous work in the Performance Indicator Review —including the Staff Discussion paper, the Draft Recommendations paper, working group minutes and the Hall & Partners study—please visit our website; http://www.esc.vic.gov.au/Water/Performance-Indicators-Review

Structure of this paper

This Final Report represents the views expressed—through submissions and the working group—in response to the Discussion paper and the Draft Recommendations paper. This paper is structured as follows:

- Chapter 1: removals from the framework
- Chapter 2: amendments to the framework
- Chapter 3: additions to the framework
- Chapter 4: summary of submissions
- Chapter 5: indicators that still require further work
- Appendix A contains a revised final indicator set and indicator definitions
- Appendix B contains a list of groups that made submissions and working group participants.

1 INDICATORS FOR REMOVAL

In our draft recommendations paper we proposed 11 indicators for removal or partial removal from the indicator list.

Table 1.1 shows the 11 indicators that will be removed—either in part and/or in full.

For a more detailed analysis of these indicators, please refer to the draft recommendations paper as well as the new definition set in appendix A.

Table 1.1 Indicators for full or partial deletion

Identifier	Indicator	Outcome	Rational for removal
Baseline explanatory data (BED)			
BED 13	Water treatment plants: Disinfection, unfiltered; Further treatment; Full treatment	Modify to full treatment only.	This indicator does not provide information of great value to us or wider stakeholders. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations. Further, the framework administered by the NWC has also moved away the full split of this indicator as it has proven difficult to distinguish between different types of water treatment plants. On this basis the NWC framework now only collects the 'full treatment' category.
Water network reliability and efficiency (REW)			
REW 4	Bursts and leaks fully rectified	Remove.	It is difficult to consistently define and measure full 'rectification'. When reporting on this indicator, it has become apparent that each water business applies different policies and procedures that result in non-comparable measures of 'full rectification'. In addition, the definition of time periods has resulted in a clustering of results, reducing the usefulness of the information. Consequently, we do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.
REW 6	Water supply interruptions restored within 3, 5 & 12 hours	Modify to 'Water supply interruptions restored within 5 hours'	Early performance of water businesses—particularly in the area of water supply interruptions—was not high. Consequently, this performance indicator was introduced to highlight improvements to service reliability achieved by the water businesses over time. Improvements made to water infrastructure over the past twenty years have reduced the usefulness of this indicator as currently defined. Results tend to cluster at 100 per cent, which does not serve to distinguish one business from another or service improvements.
REW 12	Water Pressure (Bulk Supplier)	Remove.	This indicator was developed to measure the performance of Melbourne Water regarding wholesale-retail interfaces that did not meet pressure requirement for more than 30 continuous minutes. On review, we have concluded that the results of water pressure tests are an intra-industry issue. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.
Sewerage network reliability and efficiency (RES)			
RES 5	Customers receiving 1, 2 , 3, & 4+ sewer blockages in year	Modify to 3 or more blockages only.	The inclusion of the number of sewer blockages faced by a customer each year was intended to track performance improvements over time. While improvements have been made to sewerage infrastructure, the usefulness of this data as currently collected is questionable, and the data has proven difficult to collect. Modifying this indicator to 3 or more blockages only should improve measurement accuracy and will maintain alignment with the approved service standard as applied by Schedule 2 of the Customer Service Code.
Customer responsiveness and service (CRS)			
CRS 12	Property development agreements	Remove.	When these indicators were first developed in the 1990s the performance standards of all water businesses were low. Turnaround time that property developers experienced for planned- and non-planned works was high, as was the turnaround time associated with information statements. However, with the development of processes and IT solutions, the turnaround time for property development agreements and information statements has

Identifier	Indicator	Outcome	Rational for removal
CRS 13	Information statements turned around in 5 days	Remove.	greatly improved. Currently, the results for these indicators are all near 100 per cent and therefore not useful for comparison. Further each business works to different standards for property development agreement and considerable differences in practices have been discovered during audits of this indicator. This makes comparison between businesses problematic. CRS 12 and CRS 13 focus on a narrow area of service provision that is not considered useful to a majority of customers. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.
Water conservation, reuse and recycling (CRR)			
CRR 2	Effluent reuse - water resource management	Remove.	The Department of Sustainability and Environment (DSE) provided detail regarding the types or classes of water. They identified that: Type 1, 2 and 4 water categories are technically Class A water. Type 3 water is technically Class C water. The definition for Classes A and C are directly from the Environmental Protection Agency (EPA). The working group identified that there is no need to collect the data on the current basis as it is currently provided in CRR 1. All agreed that CRR 1 provided the appropriate information and that CRR 2 served no purpose.
CRR 8	Trade wastes priority parameter	Remove.	This indicator was developed to monitor the annual loads of priority parameters for individual sewage treatment plants. We now collect this trade waste data from water businesses as required by the Department of Sustainability and Environment (DSE) on a set of standard parameters—Total Dissolved Solids (TDS), Biological Oxygen Demand (BOD), Suspended Solids (SS) and nitrogen. This refinement makes CRR8 redundant.
Drinking water quality (DWQ)			
DWQ 1	Standards for drinking water quality	Remove Melbourne Water.	While the reporting of drinking water quality is a fundamental component of performance monitoring, information that is relevant for the purposes of our reporting can be refined. We have removed: 1. Melbourne Water from 'Coverage': On review, we have concluded that standards for drinking water quality received from Melbourne Water is an intra-industry measure. We do not currently publish the results of this indicator in the Annual Performance Report or other Commission publications. 2. 'disinfection by-products' from the 'Definition': Publication of these results can be confusing where a high level of disinfection may be a positive result where water is contaminated. We do not currently publish the results of this indicator in the Annual Performance Report or other Commission publications. We will continue to report of E. coli and turbidity, which are considered the most important elements of water quality. It is important to note that the Department of Health (DH) publishes data for each of the measures that we are proposing to remove should stakeholders require additional information.
	Remove 'disinfection by-products' from the definition	Remove section.	
Waterways and drainage (WWD)			
WWD 3	Development applications	Remove in line with CRS 12 and CRS 13.	When these indicators were first developed in the 1990s the performance standards of all water businesses were low. Turnaround time that property developers experienced for planned- and non-planned works was high, as was the turnaround time associated with information statements. With the development of processes and IT solutions, the turnaround time for property development agreements and information statements has greatly improved. Currently, the results for these indicators are all near 100 per cent and therefore not useful for comparison. Further each business works to different standards for property development agreement and considerable differences in practices have been discovered during audits of this indicator. This makes comparison between businesses problematic. This indicator focuses on a narrow area of service provision it is not considered useful to a majority of customers. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.

2 INDICATOR MODIFICATION

In our draft recommendations paper we proposed that modifications should be made to 8 indicators. In addition, we identified a range of minor 'house-keeping' modifications that should be made to correct minor errors, inconsistencies and/or omissions in the definitions, measures and/or data templates.

Table 2.1 shows indicators where significant modifications have been made. Table 2.2 and table 2.3 shows indicators where minor amendments have been made.

Table 2.1 Significant modifications

Identifier	Indicator	Outcome
Water network reliability and efficiency (REW)		
REW 3	Time taken to rectify bursts and leaks	Modify to reference Victorian Safe Drinking Water Act 2003.
REW 10	Customers affected by planned water supply interruptions greater than 5 hours	Modify with minor amendments to clarify the number of residential customers affected by planned and unplanned interruptions greater than 5 hours.
Usage, price trends and payment management (UPP)		
UPP 1	Instalment plans	Modify to clearly define what an instalment plan is and what is not included.
Customer responsiveness and service (CRS)		
CRS 4	Water quality complaints	Modify by referring readers to the Department of Health's data for any additional water quality information.
CRS 7	Affordability complaints	Affordability and billing complaints now fall under the 'Payment issue complaints' category.
CRS 8	Billing complaints	
Water conservation, reuse and recycling (CRR)		
CRR 3	Volume of sewage spilt from emergency relief structures (ERS) and pumping stations (ML)	Modify with minor amendments by including the definition for 'extreme wet weather'.
CRR 6	Biosolid reuse	Modify so that the definition is aligned with the EPA definition.

Table 2.2 Indicator amendments and clarification – monthly data

Identifier	Performance indicator	Change made
RES 3	Total time taken to repair blockage/spill (Min.)	Change definitions to be minutes.
RES 6	Sewer spills from reticulation and branch sewers	Businesses should use definition as published for priority 1 and 2 spills.
RES 7	Sewer spills from reticulation and branch sewers fully contained within 5 hours	Businesses should use definition as published for priority 1 and 2 spills.
RES 9	Sewer supply customer-interruptions restored within X hours (No.)	Change to X hours and note the number of hours must tie in with the businesses' individual GSL target.
No reference	Sewer spills not caused by blockages (No.)	Removed from the template.
No reference	Sewer spills to customer properties restored within 5 hours	Removed from the template.
CRS 9	Pressure complaints	Change to flow rate.

Table 2.3 Indicator amendments and clarification – annual data

Identifier	Performance indicator	Change made
BED 1	Water customers	Recycled customers included in the split of customers. This indicator now gathers data on recycled water and duel pipe systems.
BED 4	Trade waste customers	Removed from template.
BED 6	Length of water main (km)	Recycled water main included in the split of customers.
BED 10	Metered volume of water delivered to customers (ML)	Residential recycled class A water included in the split of customers.
BED 14	Volume of sewage collected (ML)	Refer to national water report definitions.
RES 4	Water main breaks	Moved to correct category, indicator now REW 15.
No reference	Sewer spills from ERS and pumping stations (No.)	Indicator part of CRR 3.
UPP 5	Debt levels for customer subject to restriction and legal action ($)	Amended definitions to recognise in the split of restrictions.
UPP 6	Hardship grants	Clarified definitions to ensure businesses report own hardship scheme. This should just be a number and not per 100 customers.

In addition we have amended the following:

- ‘Water consumption, reuse and recycling’ has been consistently renamed ‘Water conservation, reuse, recycling’ (CRR).
- ‘Drainage and waterways services’ has been consistently referred to as ‘Waterways and drainage’ (WWD) (Melbourne Water specific).
- ‘Drainage customers’ had changed to ‘waterways and drainage charge customers’ and the ‘drainage account’ has been changed to ‘waterways and drainage account’ (Melbourne Water specific).
- Affordability is now referred to as ‘Usage, price trends and payment management’ (UPP).

3 NEW INDICATORS

In our discussion paper and draft recommendations paper we identified a range of new performance categories and indicators that we thought could provide relevant and useful information to a range of stakeholders.

Through submissions and the working group process we gained valuable feedback—this has refined our views on each potential new indicator.

The new indicators can be seen in table 3.1. These indicators will be included from 2012-13 reporting period and have been incorporated into the template.

For a more detailed analysis of these indicators, please refer to the draft recommendations paper.

Table 3.1 New indicators for inclusion in 2012-13 reporting period

Identifier	Indicator	Rational for inclusion
Customer responsiveness and service (CRS)		
CRS 12	GSL payments (No.)	We will include this indicator to capture information associated with the total number of GSL payments made each year by each water business. We already collect the total dollar value of GSL payments each year. The GSL scheme was established as an incentive framework for water businesses to address areas of poor performance, this indicator will help to highlight the number of GSL payments made.
CRS 13	Website mystery shopper	We are of the view that the website assessment would be best achieved through the application of a standardised process as applied by experts in the field. The inclusion of this measure is not intended to mandate specific content and functionality requirements, but rather provide a means for businesses to compare their website performance.
Usage, price trends and payment management (UPP)		
UPP 7	Physical visits	Consistent with the final decision relating to the implementation of a hardship related GSL measure, we will include an indicator that tallies the number of physical visits made to customer's premises where there is the likelihood—or realisation of—a customer having their water supply restricted due to hardship, non-payment and/or legal action having commenced.
Trade waste (TDW)		
BED 19	Volume of trade waste collected (ML)	This indicator uses data already captured in the templates, and results in a snapshot figure reported in the overview section of the data templates.
TDW 1	Number of trade waste customers with agreements containing customer-specific acceptance criteria	This indicator was requested for inclusion by the Department of Sustainability and Environment and it assists with our understanding of the complexity of trade waste management for a water business.

4 SUMMARY OF SUBMISSIONS

We received six submissions on the *Review of Water Performance Report Indicators – Draft Recommendations Paper.* The submissions were from the following stakeholders:

- Barwon Water (BW)
- Department of Sustainability and Environment (DSE)
- Goulburn Valley Water (GVW)
- Lower Murray Water (LMW)
- Melbourne Water (MW)
- WaterGroup Pty Ltd. (WGPL).

Trade waste

DSE suggested the inclusion of a new trade waste indicator; *Number of trade waste customers with agreements containing customer-specific acceptance criteria.*

This indicator has been included and is now TDW 1.

CRS 8 – Billing complaints

LMW requested more information on CRS 8 – Billing complaints and the frequency in which they would report this data. In addition they require more clarification on what would be classed as 'other' for this indicator.

More information has been provided in the final indicator definitions in appendix A. Billing complaints are now under 'Payment issue complaints' in CRS 7. This is defined as; 'the total number of complaints received by the water business that relate to water bill payment'.

CRS 14 – First call resolution

GVW believes that it will be difficult for water businesses to collect data on first call resolution because they are not currently collecting this information and there are often multiple points of contact for a business.

First call resolution still requires further work before its inclusion in the performance indicator set. We are requesting customer service managers to submit details on how—or if—they currently measure issue resolution. In addition, we will explore how the United Kingdom/OFWAT define and measure this indicator.

CRS 15 – Net Promoter Score and Customer Effort Score

Although GVW do not currently collect these measures they do support the inclusion of the Customer Effort Score in the customer satisfaction survey.

GVW's support has been noted.

Productivity

GVW thinks the Commission should further investigate a measure for productivity and—due to the complexity of this indicator— a small number of partial productivity measures may be more valuable. MW also requested more information on the potential productivity measure and the timing associated with it.

We will further investigate the inclusion of a productivity measure. We will develop a report focused on productivity and other relevant indicators to take effect during the third regulatory period.

Innovation

MW requested more information on the timing of a potential innovation indicator.

The value of including an indicator on innovation still requires further consideration. We will look to develop and incorporate case studies of innovation—as agreed by peer review—in the annual performance report from the 2012-13 reporting period.

Non-revenue water

WGPL suggested that non-revenue water should be reported on in two ways:

- Total annual volume of non-revenue water (ML/yr)
- Non-revenue water by m^3/km mains/day (if the number of customer connections is less than 20 customers/km) or m^3/connection/day (if the number of customer connections is 20 or more customers/km).

We already collect the total annual volume of non-revenue water and the suggested non-revenue water indicator for the NWI.

Raw water

WGPL suggested the following indicator be included:

- Total annual volume of raw water lost between extraction and supply input (ML/yr).

The total annual volume of raw water lost may not be practically measured by water businesses given the diversity of supply. While the data may have some merit, we do not believe that this is a measure of performance that can be compared across businesses.

Drainage customers

MW has requested that 'drainage customers' be referred to as 'waterways and drainage charge customers'.

This is consistent with the terminology used in the 2008 Water Price Review determination and the change has been made.

Template

LMW requested further information on the new template.

The new template will be emailed and explained to water businesses.

5 INDICATORS REQUIRING FURTHER WORK

Although a great deal of work was conducted over this review period, not all indicators were finalised. Table 5.1 displays the potential new indicators that require further work and analysis before possible implementation. These indicators will not be included in the 2012-13 reporting period, but will be further considered at a later date.

We would like to broadly consult with stakeholders on these potential indicators. In particular, we would like the involvement and input of the consumer groups to ensure that any new indicators would benefit customers.

We will not be investigating these indicators until after the price review process is complete in June 2013. If we proceeded with indicator development or working groups before this time, it would be too onerous on the water businesses as well as Commission staff.

Table 5.1 Indicators requiring further investigation

Potential indicator	Outcome
Customer responsiveness and service (CRS)	
First call resolution	We will form a working group to consider this and other customer service indicators. We will consider its inclusion based on the outcomes of the consulation. We are requesting customer service managers to submit details on how—or if—they currently measure issue resolution. We will explore how the United Kingdom/OFWAT define and measure this indicator.
Net promoter score (NPS) or Customer effort score (CES)	We are requesting customer service managers to submit details on how—or if—they currently measure or collect data on CES or NPS and how this data is used.
Customer satisfaction survey	We are requesting customer service managers to consider the indicators that they currently use to compare their own business to other businesses as candidates for standardisation.
Resource security (SEC)	
Supply volume available to meet demand volume (ML) Demand versus sustainable yield Independent supply systems	The Department of Sustainability and Environment (DSE) indicated that they were undertaking work on developing resource security measure and believe that is the more appropriate forum for developing this measure. As such, all stakeholders should work with the DSE to advance the development of resource security measures. Once DSE has finalised any resource security measure we will consider their inclusion in the performance report.
Financial information (FIN)	
FFO interest cover (times) Internal financing ratio (%) FFO/net debt Net debt/Regulatory Asset Value	We will investigate the presentation of financial information in a report separate to the performance report in the third regulatory period. Much of this information can be derived from the data collected for the regulatory accounts. We will also look at the water businesses' performance against their Water Plan forecast performance once the Water Price Review is completed.
Productivity (PRO)	
Operation maintenance and administration (OMA) costs per customer Cost to serve ($ per customer)	We will develop a report focused on productivity and other relevant indicators to take effect during the third regulatory period. These indicators are only examples of what could be collected as a productivity indicator. Other possible productivity indicators could already be derived from data we currently collect for the performance report and regulatory accounts. We need to determine what information would be useful and how it would be presented.
Innovation (INN)	
	We will look to develop and incorporate case studies of innovation—as agreed by peer review. This would not be a performance measure as much as a set of case studies of best practice in the water industry.

6 NEXT STEPS

Water businesses will begin reporting the indicators as specified in this report and the final indicator set in appendix A for the 2012-13 reporting period. Water businesses will be provided with new templates, the new indicator definitions, as well as any other information they require to complete the data provision process. The new indicator definitions will also be posted on our website: www.esc.vic.gov.au

Once the price review process is complete in June 2013, we will begin to further investigate the 'indicators requiring further work'. If you would like to be a part of the working group for any of these indicator categories, please send us your details and we will contact you when the process begins; water@esc.vic.gov.au

Alternatively details can be sent in physical form to:

Water
Essential Services Commission
Level 2, 35 Spring Street
Melbourne VIC 3000

Any further inquiries on this paper can be addressed to Marcus Crudden on (03) 9651 3917 or via water@esc.vic.gov.au

APPENDIX A. FINAL INDICATOR SET AND DEFINITIONS

Table A.1 below presents the new indicator set.

For ease of reference we have included the indicator reference terminology as used in this document and also included the relevant corresponding indicator as utilised by the National Water Commission in its national performance framework definitions handbook.

Table A.1 Performance indicator definitions

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Baseline explanatory data (BED)						
BED 1	Water customers	Residential Non-Residential Recycled	Regional and Metropolitan	Context and normalising measure	For performance reporting purposes, a water customer is a property which, at the end of the reporting period: - is connected to the water business's water system; and - receives a fixed and/or usage account. A tenanted property which is separately metered and in respect of which the tenant is liable for water usage counts as one water customer. The owner and the tenant are not separately counted as water customers. For performance reporting purposes a water customer does not include: - a body corporate; - or a property which is serviced but is not connected to the water business's water system.	C4
BED 2	Sewerage customers	Residential Non-Residential	Regional and Metropolitan	Context and normalising measure	For performance reporting purposes, a sewerage customer is: - a water customer which is connected to the sewerage system (hence is separately billed for sewerage services (fixed and/or usage)); and - any other property which, at the end of the reporting period, is connected to the sewerage system and is separately billed for sewerage services (fixed and/or usage). A sewerage customer who is also a trade waste customer counts as one sewerage customer.	C8
BED 3	Waterways and Drainage Charge Customers		Melbourne Water	Context and normalising measure	For performance reporting purposes, a drainage customer is a property which receives a waterways and drainage account at the end of the reporting period.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
BED 4	Trade waste customers		Regional and Metropolitan	Context and normalising measure	A trade waste customer means a customer who has entered into a trade waste agreement with the licensee, or has received the business's consent to discharge trade waste to sewer. Note: this does not include 'deemed' trade waste customers, with agreements arising through customer conduct in accordance with clause 4.4 of the Trade Waste Customer Service Code.	
BED 5	Permanent population served		Regional and Metropolitan	Context and normalising measure	Total permanent population connected or able to be connected to the water business's system. Information should be derived from the most recently available census data and adjusted for growth.	C1
BED 6	Length of water main (km)	Water Recycled water	Melbourne Water	Context and normalising measure	Includes all the water business's mains in operation at the end of the reporting period. Includes transfer, distribution, reticulation mains, non-potable and third pipe mains. Total length of water main = sum water and recycled water main. Does not include property service pipes. Does not include decommissioned assets.	A2, A3
BED 7	Length of sewerage main (km)		Melbourne Water Regional and Metropolitan	Context and normalising measure Properties served per km of sewer main	Includes all the water business's sewerage mains in operation at the end of the reporting period. Includes pressure mains. Does not include house connection branches. Does not include mains carrying treated effluent.	A5, A6
BED 8	Source of water	Surface water Groundwater Desalination	Melbourne Water Regional and Metropolitan		The total volume of water (potable and non-potable) abstracted by the water business from surface water sources such as dams, rivers or irrigation channels during the reporting period. The total volume of water 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 i.e. from rivers, desalination plants or sewerage plants (recycling). Other forms of artificial recharge (i.e. storm water) not counted elsewhere are to be included. The total volume of water sourced from desalination plants during the reporting period.	W1, W2, W3, W4, W5, W6, W7

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
		Recycling Bulk supplied Total water supplied			The total volume of water supplied by the water business sourced from recycled water during the reporting period including recycled water from direct or indirect reuse. Water supplied for agribusiness by the business should also be included where potable water (or raw supply to the potable system) would normally be used. The total volume of water (potable and non-potable) purchased from another business or entity outside this business's geographic area of responsibility. The volume of water will include water which is subsequently exported (sold) to another business. The total volume of recycled water purchased from another business or another entity outside this business's geographic area of responsibility. This is the sum of the volumes reported above as supplied from dams, river extraction, groundwater, desalination, recycling and bulk supplier.	
BED 9	Volume of water received (ML)		Melbourne Water Regional and Metropolitan	Context and normalising measure	The volume of water received by the water business from its headworks (including its water treatment plants) and from any wholesaler of water. Volume of water delivered to retailers by Melbourne Water.	W5, W7
BED 10	Metered volume of water delivered to customers (ML)	Residential Residential - class A recycled Non-residential	Regional and Metropolitan	Context and normalising measure Average residential household consumption	The metered volume of water delivered to customers over the reporting period.	W8, W9, W12
BED 11	Volume of bulk water exports		Melbourne Water Regional and Metropolitan		The total volume of water (potable and non-potable) sold to another water business or another entity outside this utility's geographic area of responsibility.	W14
BED 12	Volume of bulk recycled water exports		Melbourne Water Regional and Metropolitan		The total volume of recycled water sold to another utility or another entity outside business's geographic area of responsibility.	W15

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
BED 13	Water treatment plants	Full treatment			Full treatment: the water treatment plant includes processes to remove colour/and or turbidity as well as providing filtration and disinfection. In addition, it may include processes for taste and/or odour reduction, softening, pH correction and target removal of elements and compound such as iron, manganese, nitrates and pesticides.	A1
BED 14	Volume of sewage collected (ML)	Wholesaler Treatment plant	Melbourne Water Regional and Metropolitan	Context and normalising measure Sewage collected per property	The total volume of sewage (including trade waste) delivered by the water business to any wholesaler of sewage treatment services or to its own sewage treatment plants.	W18
BED 15	Sewage treatment plants	Primary treatment Secondary treatment Tertiary treatment	Melbourne Water Regional and Metropolitan	Context and normalising measure	Number of sewage treatment plants in operation at the end of reporting period.	A4
BED 16	Volume of sewage treated (ML)	Primary treatment Secondary treatment Tertiary treatment	Melbourne Water Regional and Metropolitan	Context and normalising measure	The volume of sewage treated at the water business's sewage treatment plants. - primary treatment means the removal of settleable solids; - secondary treatment means biological oxidation achieving typically 85%-90% reduction in biological oxygen demand (BOD); - tertiary or enhanced treatment means enhanced reduction of BOD and suspended solids from secondary treated sewage and significant nutrient reduction.	E1, E2, E3

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
BED 17	Volume of sewage treated fully compliant (ML)		Melbourne Water Regional and Metropolitan	Per cent of sewage volume treated that was compliant	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. 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 compliance x volume treated + STP2 compliance x volume treated +……..) / Total volume treated for all treatment plants in reporting period.	E4
BED 18	Sewage treatment plants compliant		Melbourne Water Regional and Metropolitan	Number of sewage treatment plants compliant at all times	Compliance is where the sewage treatment works effluent meets the licence condition prescribed by the environmental regulator. Non-compliance 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.	E5
BED 19	Volume of trade waste collected (ML)	Wholesaler Treatment plant	Regional and Metropolitan	Total volume of trade waste (metered and estimated) delivered to a wholesaler and /or treatment plant.	Volume of trade waste received into sewers delivered to a wholesaler's treatment plant (ML). Volume of trade waste received into sewers delivered to a water business's own treatment plant (ML). Total volume of trade waste received into sewers (ML).	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Water network reliability and efficiency (REW)						
REW 1	Bursts and leaks	Priority 1 Priority 2 Priority 3	Regional and Metropolitan	Burst and leaks per 100km of water main	An unplanned event in which water is lost which is attributable to failure of a pipe, hydrant, valve, fitting or joint material (being the mains and trunk infrastructure, excluding the mains to meter connections) regardless of cause. Priority 1 means a burst or leak which causes, or has the potential to cause, substantial damage or harm to customers, water quality, flow rate, property or the environment. Priority 2 means a burst or leak which causes, or has the potential to cause, minor damage or harm to customers, water quality, flow rate, property or the environment. Priority 3 means a burst or leak which is causing no discernible impacts on customers, property or the environment. A burst or leak may not necessarily result in loss of supply.	
REW 2	Total minutes to respond to bursts and leaks (Min.)	Priority 1 Priority 2 Priority 3	Regional and Metropolitan	Average minutes to respond to priority 1, 2 and 3 burst and leaks	The duration between the times the water business is first notified or becomes aware of a burst or leak to the time at which the water business arrives at the site of the burst or leak.	
REW 3	Time taken to rectify bursts and leaks (Min.)	Priority 1 Priority 2 Priority 3	Regional and Metropolitan	Average minutes taken to fully repair and rectify bursts and leaks	The total job duration, including time from receiving first notification, responding to, and rectifying the fault to the required level of service. Where interruption is to drinking water supply, service of potable water must be restored. Potable water should comply with the requirements of the Victorian Safe Drinking Water Act 2003. Follow-up rectification works, such as reinstatement of nature strips are not included.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
REW 5	Water supply interruptions	Planned Unplanned	Regional and Metropolitan	Water supply interruptions per 100km of water main	A water supply interruption is any event causing a total loss of water supply due to any cause. An unplanned interruption means an interruption which is caused by a fault in the water business's system. Interruptions do not include those caused by bursts or leaks in the property service (mains to meter connection) unless the burst or leak requires the mains to be shut down for repair. A planned interruption means an interruption of supply to a customer for which the water business has provided at least 2 business days advanced notification. Where an interruption occurs on a reticulated recycling supply which includes in house uses (such as toilet flushes) this should be included.	
REW 6	Water supply interruptions restored within 5 hours	Planned Unplanned	Regional and Metropolitan	% of water supply interruptions restored within 5 hrs	Where the loss of water supply is due to the shutdown of a section of water main, the water supply interruption begins when the water supply is shut off and ends when the main is fully recharged. Otherwise, the water supply interruption begins when the water supply is lost and ends when it is fully restored.	
REW 7	Water supply customer-interruptions	Planned Unplanned	Regional and Metropolitan	Average customer interruption frequency	A water supply customer-interruption is a loss of water supply to an individual customer due to a water supply interruption. For example, a water supply interruption which causes loss of supply to 100 customers is 100 customer-interruptions.	C17
REW 8	Customer-minutes to restore water supply (Min.)	Planned Unplanned	Regional and Metropolitan	Average duration of water supply interruptions Average customer minutes off supply	The total duration of all water supply customer-interruptions. For example, a water supply interruption which causes loss of supply to 100 customers and lasts for 150 minutes counts as 15 000 customer-minutes to restore water supply.	C15
REW 9	Customers receiving 1, 2, 3, 4, 5, and 6+ water supply interruptions in year	Unplanned	Regional and Metropolitan	Number of customers receiving 1, 2, 3, 4 ,5, and 6+ interruptions in a year as % of customers	The number of water customers experiencing receiving 1, 2, 3, 4, 5, and 6+ interruptions in the 12 months ending on the final date of the annual reporting period.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
REW 10	Customers affected by planned and unplanned water supply interruptions greater than 5 hours	Planned Unplanned	Regional and Metropolitan	Number of residential customers affected by planned and unplanned interruptions greater than 5 hours	The number of planned residential water customer-interruptions greater than 5 hours. For example, a water supply interruption which causes loss of supply to 100 customers is 100 customer-interruptions.	
REW 11	Customers affected by planned water supply interruptions in peak hours (5am-9am and 5pm-11pm)		Regional and Metropolitan	Number of residential customers affected by planned water supply interruptions in peak hours (5am-9am and 5pm-11pm)	The number of planned residential water customer-interruptions during peak hours (5am-9am and 5pm-11pm). Customer-interruptions that start outside peak hours but continue into peak hours are included.	
REW 13	Non-revenue water		Regional and Metropolitan	% non-revenue (unaccounted) water	Unaccounted water is the difference between the volume of bulk water supplied and the volume of water billed to the water businesses customers.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
REW 14	Leakage		Regional and Metropolitan Melbourne Water	Infrastructure Leakage Index (ILI) Real water losses per connection per day Real water losses per kilometre per day	Infrastructure Leakage Index (ILI) The ILI is the ratio of the Current Annual Real Losses (CARL, calculated from a Water Balance) to the Unavoidable Annual Real Losses (UARL, calculated from an equation developed by the IWA Water Losses Task Force). For Melbourne Water the measure is calculated as the estimated manageable losses over average yearly consumption. Total estimated manageable losses from aqueducts, reservoirs, pipes and operations divided by average yearly water supplied to retail water companies. Estimates of losses do not include evaporation, seepage or environmental flows. Real Losses Leakage and overflows from mains, service reservoirs and service connections prior to customer meters. Current Annual Real Losses (CARL) The numerator of the ILI calculation – real losses as measured in the pressurised distribution system up to the point of customer metering. When calculating the Current Annual Real Losses, a number of assumptions are required regarding errors in metered components of the Water Balance, and estimates of unmetered components. For Unbilled Authorised Consumption, Unauthorised Consumption and Customer Metering Errors, water utilities may elect to use the default values prescribed below, or determine the actual values for their operations. The defaults are outlined in the NWI handbook. Unbilled Authorised Consumption Any consumption for which a bill is not issued to the consumer (e.g. process water at water treatment works, hydrants for mains flushing, fire services, etc.). It can be metered or unmetered. Unauthorised Consumption Generally this refers to illegal use. The water utility should be consistent across reporting years in calculating its CARL and, where appropriate, have supporting documentation to verify assumptions for the purpose of auditing.	A9, A10, A11

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
					Service Connections The number of service connections is not the same as the number of metered accounts or connected properties. The number of service connections can be taken as being the number of metered accounts, minus the total of any sub-meters (after master meters e.g. to shops and flats), plus the estimated number of unmetered service connections (e.g. fire service connections).	
REW 15	Water main breaks		Regional and Metropolitan	Water main breaks per 100km	The total number of main breaks and bursts in all diameter mains for the reporting period. Excludes those in the mains to meter connection and weeps or seepages associated with above ground mains that can be fixed without shutting down the main.	A8

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Sewerage network reliability and efficiency (RES)						
RES 1	Sewer blockages	Main House Connection Branch (HCB)*	Regional and Metropolitan*	Sewer blockages per 100 km of sewer main	A confirmed partial or total blockage which causes an interruption to service and/or a spill. Includes all trunk and reticulation main blockages (including common effluent pipelines, rising mains and vacuum system mains), but excludes blockages in the service connection or house connection branch and the property drain. *Metropolitan water businesses are to include an extra category of blockages on the HCB, where it is their responsibility to maintain the service.	A14
RES 2	Total minutes to respond to reported blockage/spill (Min.)		Regional and Metropolitan	Average minutes to respond to a reported blockage/spill	Average number of minutes to attend and commence rectification of a reported blockage/spill measured from the time notification is made.	
RES 3	Total time taken to repair blockage/ spill (Min.)		Regional and Metropolitan	Average number of minutes taken to repair a blockage/spill	Average number of minutes taken to repair a blockage/spill measured from the time notification is made.	
RES 5	Customers receiving 3 sewer blockages in year		Regional and Metropolitan	Average number of customers 3+ sewerage blockages in a year as a % of customers	The number of sewerage customers receiving 3+ sewerage blockages in the 12 months ending on the final date of the annual reporting period.	
RES 6	Sewer spills from reticulation and branch sewers	Priority 1 and 2	Regional and Metropolitan Melbourne Water	Number of spills	For the purpose of this indicator, a priority one or two sewer spill is a failure to contain sewage within the sewerage system, excluding: - spills from emergency relief structures (a manhole is not an emergency relief structure); - pump station spills; and - spills due to house connection branch blockages. Priority I spill means, a spill that results in - a public health concern; - significant damage to property; - a discharge to a sensitive receiving environment; - a discharge from a sewer pipe that is 300mm diameter or greater; or	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
					- the flow is >80l/min. Priority 2 spill means any minor failure to contain sewage within the sewerage system and any spill affecting several users which results in minor property damage or results in a surcharge outside a building which does not pose a health risk.	
RES 7	Sewer spills from reticulation and branch sewers fully contained within 5 hours	Priority 1 and 2	Regional and Metropolitan	% of sewer spills contained within 5 hrs	A sewer spill is to be regarded as: - having taken place at the time the water business becomes aware of the spill; and - being fully contained when there is no longer a discharge from the containment area. Containment means the sewage spill has ceased or has been alleviated by by-pass pumping/diversions, educations or sand bagging.	
RES 8	Sewer spills to customer's property		Regional and Metropolitan	Number of spills	A sewer spill caused by a fault in the water business's system that discharges to a customer's property. Excludes sewer spills caused by faults in the service connection or house connection branch and the property drain.	
RES 9	Sewer supply customer interruptions restored within x hours* (No.)		Regional and Metropolitan	Number of residential customers affected by sewerage interruptions restored within specified time *Businesses should align the number of hours to their GSL target. For example – in the case of Yarra Valley Water and South East Water, the time is 4 hours to recognise their GSL targets.	The number of residential sewerage customers experiencing sewerage interruptions restored within x hours.* Sewerage interruptions means a confirmed partial or total blockage which causes an interruptions to service Restore means the repair of a blockage/interruption measured from the time notification is made. It does not include interruptions caused by faults in the customer's pipe.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
RES 10	Customers affected by sewer spills in a house not contained within 1 hour of notification		Regional and Metropolitan	Number of residential customers affected by sewer spills in a house not contained within 1 hour of notification	The number of residential sewerage customers experiencing a sewer spill in their house not contained within 1 hour of notification, caused by a fault in the water businesses' system. Contained means the sewage spill has ceased or has been alleviated. It does not include sewer spills caused by faults or blockages in the customer's pipes.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Customer responsiveness and service (CRS)						
CRS 1	Call connect time to operator (Sec)	Account line Fault line	Regional and Metropolitan Melbourne Water	Average time taken for call to be connected to operator	The average time taken for a caller to be connected to an operator should they elect to, or be required to do so. Average time spent in getting through to an operator on the account / fault line. Measured from time the call is answered by "auto attendant" (IVR) It does not include calls that are resolved by an automated system, or hang ups. Businesses with one contact point should report the figure against the account line.	
CRS 2	Calls connected to operator within 30 sec	Account line Fault line	Regional and Metropolitan Melbourne Water	% of calls connected to operator within 30 seconds	The time in which a call connected to operator begins when the call is connected to the customer service operators' phone system. Calls to account / fault line answered within 30 seconds (beginning when the call is put through to customer service operator's phone system). It does not include calls that are resolved by an automated system, or hang ups. Businesses with one contact point should report the figure against the account line.	C14
CRS 3	Total complaints		Regional and Metropolitan	Complaints per 100 customers	A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water business, its employees or contractors. Australian Standards define a complaint as an "expression of dissatisfaction made to an organization, related to its products, or the complaints-handling process itself, where a response or resolution is explicitly or implicitly expected." (AS ISO 10002-2006) Complaints from separate customers arising from the same cause count as separate complaints. Includes complaints received by the water utility in person, by mail, fax, phone, email or text messaging.	C13

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
CRS 4	Water quality complaints	Colour Turbidity Taste & odour Other	Regional and Metropolitan	Complaints per 100 customers	The total number of complaints received by the water business that relate to water quality, including water quality complaints resulting from operational practices. Includes any complaints with respect to water quality, this is any complaint regarding discolouration, taste, odour, stained washing, illness, or cloudy water (e.g. caused by oxygenation).	C9
CRS 5	Water supply reliability complaints		Regional and Metropolitan	Complaints per 100 customers		
CRS 6	Sewerage service quality and reliability complaints		Regional and Metropolitan	Complaints per 100 customers	When a customer reports a blockage or spill, this is not counted as a complaint unless the customer expresses dissatisfaction about the interruption.	
CRS 7	Payment issue complaints		Regional and Metropolitan	Complaints per 100 customers	The total number of complaints received by the water business that relate to water bill payment.	
CRS 9	Flow rate complaints		Regional and Metropolitan	Complaints per 100 customers	The total number of complaints received by the water business that relate to flow rate and/or water pressure.	
CRS 10	Sewage odours complaints		Regional and Metropolitan	Complaints per 100 customers	The total number of complaints received by the water business that relate to sewage odour.	
CRS 11	Other complaints		Regional and Metropolitan	Complaints per 100 customers	Includes complaints of quality and timeliness of other services, e.g. – connections, account confidentiality, responding to correspondence, and staff behaviour. Complaints about trade waste services are included in this category.	
CRS 12	GSL payments (No.)		Regional and Metropolitan		The total number of GSL payments made to customers per year.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Usage, price trends and payment management (UPP)						
UPP 1	Instalment plans	Residential Residential concession Non-residential	Regional and Metropolitan	% of customers on instalment plans	Total number of instalment plans entered into during the reporting period. An instalment plan is an alternative payment arrangement (confirmed in writing) between the customer and the water business in accordance with clause 5.4 of the Customer Code. A verbal extension of the payment period does not constitute an instalment plan.	
UPP 2	Restrictions applied for non-payment of bill	Residential Residential concession Non-residential	Regional and Metropolitan	% of customers restricted	The total number of restrictions applied for non-payment of water bills in the reporting period. It does not include restrictions carried out for breach of water restriction or disconnections due to unsafe infrastructure, or customers who choose to disconnect from the water business's supply (e.g. due to preference for a tank water supply).	C18
UPP 3	Legal action for non-payment of bill	Residential Residential concession Non-residential	Regional and Metropolitan	% of customers subject to legal action	The number of customer accounts forwarded to a solicitor for legal action, subjecting the customers concerned to additional costs. Cases in which accounts are forwarded to a solicitor for legal action and the legal costs to the customer are subsequently waived should be included. It does not include where a business threatens to take legal action, but does not proceed.	C19
UPP 4	Restriction duration (Days)	Residential	Regional and Metropolitan	% of restrictions restored within 3 days % of restrictions still in place after 14 days	Number of residential restriction for non-payment that are removed within 3 days of the restriction being applied. Number of residential restriction for non-payment that are still in place 14 days after the restriction being applied.	
UPP 5	Debt levels for customer subject to restriction and legal action ($)	Residential – restriction Residential – legal action	Regional and Metropolitan	Average debt levels for customer subject to restriction or legal action	Residential customer debt levels are to be measured at the time action is taking to recover the debt either by legal means or by the use of restriction.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
UPP 6	Hardship grants*		Regional and Metropolitan	Number of hardship grant applications Number of hardship grants Value of hardship grants	Total number of hardship assistance grant applications made under the water business's hardship policy. Total number of hardship assistance grants awarded under the water business's hardship policy. Total value of hardship assistance grants awarded under the water business's hardship policy. *Grants refer to a business's own scheme, not government schemes.	
UPP 7	Physical visits (No.)		Regional and Metropolitan	Number of physical visits associated with GSL process management	The total number of physical visits made to a customer's residence in relation of Step 5 of the Check-list of minimum "reasonable endeavours" (attempt at personal contact by personal visit with a customer), required before a water supply restriction can be put in place.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Water conservation, reuse, recycling (CRR)						
CRR 1	Effluent reuse (ML) – End use	Volume of effluent produced (excludes evaporation) Percentage recycled for urban and industrial uses Percentage recycled for agricultural uses Percentage recycled for beneficial allocations (i.e. environmental flows) Percentage recycled within process Volume discharged to the environment (i.e. ocean outfalls or inland water discharges)	Melbourne Water Regional and Metropolitan	Volume of effluent reused % of effluent reused % of effluent reused by category	Volume reused means volume of treated sewage effluent reused. It includes all treated effluent that is used by either the water business, a business supplied by the water business, or supplied through a third pipe system for urban reuse. Evaporation is excluded. Volume of treated effluent reused means reuse undertaken in accordance with EPA published guidelines or exempted from EPA licensing on the basis of being recognised as a legitimate reuse activity. The percentage of recycling is to be calculated as: % category recycling = (category volume recycled) (volume effluent produced + volume of within process recycling)	W26, W27
CRR 3	Number of events and volume of sewage spilt from emergency relief structures (ERS) and pumping stations (ML)	Blockage Hydraulic Extreme wet weather System failure	Melbourne Water Regional and Metropolitan	Volume of sewage spilt as a % of the volume of sewage transported	An estimation of spill volumes may be used where direct measurement of spill volume cannot be made. Extreme wet weather–1 in 5 year event.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
CRR 4	Sewage treatment standards		Melbourne Water Regional and Metropolitan	Number of analyses complying with licence agreements as % of samples	Analyses performed means the total number of EPA license compliance analyses performed on the treated effluent for all treatment plants. Analyses complying mean the number of analyses complying with EPA license limits for all treatment plants. Non-compliance means the water business has not met a quantitative standard prescribed by an EPA licence (or equivalent).	
CRR 5	CO2 Equivalent Emissions (Tonne)	Water treatment and supply Sewerage treatment and management Transport (i.e. vehicles) Other (i.e. office buildings) Offsets	Melbourne Water Regional and Metropolitan	Net tonnes CO2 – equivalents	Net tonnes of CO2 equivalent emissions for the whole business and their activities, allowing for sequestration. Note: Conversion factors for greenhouse emissions should be based on those provided by the Department of Climate Change – National Greenhouse Accounts (NGA) Factors (July 2010). NGA factors may also point to other info sources such as the National Greenhouse & Energy Reporting System (Measurement Determination) for further technical information. To ensure consistency with national reporting requirements (e.g. NGERS), scope 1 and scope 2 emissions only are included in the National Performance Framework. Scope 3 emissions are excluded.	E9, E10, E11, E12 (including bulk measures)
CRR 6	Biosolid reuse	Mass produced Mass reused Mass stored	Melbourne Water Regional and Metropolitan	% of biosolids reused	Mass produced means the mass dry weight of biosolids produced by the licensee's sewage treatment plants. Mass reused means the mass dry weight of biosolids reuse undertaken in accordance with EPA published guidelines or exempted from EPA licensing on the basis of being recognised as a legitimate reuse activity. Mass stored means the mass dry weight of biosolids stored by, or on behalf of, the licensee. Biosolid means: a stabilised solid that meets EPA requirements for reuse. It does not include non-stabilised sludge.	E8

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
CRR 7	Trade waste volume received		Melbourne Water Regional and Metropolitan	Volume received to each treatment plant as a % of total volume	The aggregated volumes of trade waste received by the water business and reported separately as a percentage of treatment facility influent for the customer categories of: - Industrial - Commercial	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Drinking water quality (DWQ)						
DWQ 1	Standards for drinking water quality		Regional and Metropolitan	% of connections receiving water meeting standards Number of zones meeting *E. coli* and turbidity standard	Number of connections receiving drinking water that complies with the standard for E. coli and turbidity, expressed as a proportion of connections receiving drinking water from that supplier. Non-potable (regulated) supplies are excluded from calculations. "Complies with the standard" means each water sampling locality whose annual compliance results comply with the standards for E. coli and turbidity, then the zone is weighted for connections. Note: A zone is equivalent to a water sampling locality as defined in the Safe Drinking Water Regulation's 2005.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Waterways and drainage (WWD)						
WWD 1	Reduction in nitrogen loads (tonnes) to Port Phillip Bay		Melbourne Water	Reduction in nitrogen loads (tonnes) to Port Phillip Bay from water quality improvement infrastructure	Design nitrogen loads are established for each wetland based on the theoretical estimates of reduction that would be achieved through the use of best practice design.	

Indicator reference	Performance indicator	Split	Coverage	Performance measure	Definition	NWC Reference
Trade Waste (TDW)						
TDW 1	Number of trade waste customers with agreements containing customer-specific acceptance criteria.		Regional and Metropolitan	Number of trade waste customers with agreements containing customer-specific acceptance criteria.	The total number of trade waste customers with agreements containing customer-specific acceptance criteria. Trade waste customers must have some form of trade waste agreement with their water business. The Trade Waste Customer Service Code requires this trade waste agreement to specify (or refer to) the relevant trade waste discharge limitations, normally the water business's Statement of Approved Acceptance Criteria, which is a common set of acceptance criteria applying to all trade waste customers. The code allows for water businesses to establish customer-specific acceptance criteria for one or more parameters for an individual customer, in order to suit the specific requirements of the customer and the sewerage catchment and treatment systems. This indicator reflects the number of trade waste customers with one or more of these customer-specific parameters in their trade waste agreement.	

APPENDIX B. SUBMISSIONS AND WORKING GROUP PARTICIPANTS

Table B.1 Submissions to the discussion paper

Submitters
South Gippsland Water
Consumer Utilities Advocacy Centre
South East Water
Melbourne Water
Environment Protection Agency
Lower Murray Water
Barwon Water
Central Highlands Water
East Gippsland Water
Goulburn Valley Water
Western Water
Water Industry Operators Association of Australia (WIOA)
Westernport Water
Mike Smith

Table B.2 Submissions to the draft recommendations paper

Submitters
Barwon Water
Department of Sustainability and Environment
Goulburn Valley Water
Lower Murray Water
Melbourne Water
WaterGroup Pty Ltd.

Table B.3 Working group members – Workshop I - 7 May 2012

Organisation	Representative
Central Highlands Water	Colin Young
City West Water	Andre Kersting
	Danielle Roche
Coliban Water	Jarrah O'Shea
Department of Health	Rodney Dedman
	David Sheehan
Department of Sustainability and Environment	Binhur Sappideen
East Gippsland Water	Rob Carlesso
	Brett Millington
Energy and Water Ombudsman Victoria	Belinda Crivelli
Essential Services Commission	Marcus Crudden
	Michael Duncan
	Victoria Hein
	Kerri Heron
	Chris Hutchins
	Ross Tsokas
Melbourne Water	Donna Bui
	David Flower
	Robert Yurisich
South East Water	Alison Le Fevre
	Satish Sridharan
Wannon Water	Steve Kearns
Western Water	Vicki Pinder
	Judy Wignell
Yarra Valley Water	Maurice Hanratty

Table B.4 Working group members – Workshop II - 28 May 2012

Organisation	Representative
Barwon Water	Denis Musaefendic
Central Highlands Water	Colin Young
City West Water	Andre Kersting
East Gippsland Water	Rob Carlesso
	Brett Millington
Department of Health	David Sheehan
Department of Sustainability and Environment	Binhur Sappideen
Energy and Water Ombudsman Victoria	Belinda Crivelli
Essential Services Commission	Marcus Crudden
	Michael Duncan
	Victoria Hein
	Kerri Heron
	Chris Hutchins
Melbourne Water	Donna Bui
South East Water	Satish Sridharan
Wannon Water	Steve Kearns
Western Water	Vicki Pinder
	Judy Wignell
Yarra Valley Water	Maurice Hanratty