ESSENTIAL SERVICES COMMISSION

REVIEW OF WATER PERFORMANCE REPORT INDICATORS

DRAFT RECOMMENDATIONS PAPER

JUNE 2012

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OVERVIEW

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.

We asked that submissions assess our proposals with reference to the core principles established at the inception of the performance monitoring framework. Fourteen submissions were received; we also formed a working group whose members—and views— represented the diversity of the sector (see appendix B). The working group met twice to provide additional advice on the development of water performance reporting.

This Draft Recommendations Paper represents the views expressed—through submissions and the working group—in response to the Discussion Paper.

Structure of this paper

This draft recommendations paper represents the views expressed—through submissions and the working group process—in response to the discussion paper. This also includes consideration of issues raised by others in response to the discussion paper. We present our preliminary views on each of the matters raised.

- Chapter 1: outlines proposed additions to the framework
- Chapter 2: outlines proposed removals from the framework
- Chapter 3: outlines proposed amendments to the framework
- Appendix A contains a proposed revised indicator set
- Appendix B provides information on stakeholder participation.

How to respond

Feedback in the form of written submissions should address the draft recommendations proposed throughout this paper.

Please send submissions to water@esc.vic.gov.au by **Friday 13 July 2012**. Submissions will be made available on our website, except for any information clearly identified as commercially confidential or sensitive. Any material that is confidential should be clearly marked as such.

Any queries regarding this paper or the performance indicator review process should be directed to:

Marcus Crudden
Senior Regulatory Manager
Ph: 9651 3917

or

Victoria Hein
Regulatory Analyst
Ph: 9651 3675

1 PROPOSED NEW CATEGORIES AND INDICATORS

In our discussion 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 the working group process we gained valuable feedback—this has refined our views on each indicator. A summary of our draft recommendations can be seen in table 1.1. This chapter provides an overview of the approach proposed in our discussion paper, information received during the consultation process and our draft recommendation.

Several submissions and valuable feedback gained through the working group process allowed us to refine our proposals on each indicator.

Table 1.1 New categories and indicator – summary

Identifier	Indicator	Draft recommendation
Customer responsiveness and service (CRS)		
CRS 1	Website mystery shopper	
CRS 2	First call resolution	No action now.
CRS 3	Net promoter score (NPS) or Customer effort score (CES)	Further development for inclusion in reporting during the third regulatory period.
CRS 4	Customer satisfaction survey	
CRS 12	GSL payments (No.)	Proceed. Include from 2012-13 reporting period.
Usage, price trends and payment management (UPP)		
UPP 7	Physical visits	Include from 2012-13 reporting period.
Financial information (FIN)		
FIN 1	FFO interest cover (times)	Proceed. Further development for inclusion in new report focused on productivity and financial information during the third regulatory period.
FIN 2	Internal financing ratio (%)	
FIN 3	Net Debt payback (years)	
FIN 4	FFO/net debt	
FIN 5	Net debt/Regulatory Asset Value	
Resource security (SEC)		
SEC 1	Supply volume available to meet demand volume (ML)	Department of Sustainability and Environment (DSE) to lead the process with ESC and water sector input.
SEC 2	Demand versus sustainable yield	
SEC 3	Independent supply systems	
Productivity (PRO)		
PRO 1	Operation maintenance and administration (OMA) costs per customer	Proceed. Further development for inclusion in new report focused on productivity and financial information during the third regulatory period.
PRO 2	Cost to serve ($ per customer)	
Trade waste (TDW)		
TDW 1	Number of sampling activities	Do not include
BED 19	Volume of trade waste received (ML)	Proceed. Include from 2012-13 reporting period.
Innovation (INN)		
	Businesses to provide additional feedback.	No action now. Further development for potential inclusion in reporting during the third regulatory period.

1.1 Customer responsiveness and service

CRS 1 – Website mystery shopper

Feedback in submissions on this indicator varied. Some businesses noted that the website assessment process has merit (Barwon Water, Consumer Utilities Advocacy Centre (CUAC), Lower Murray Water, Western Water) and noted that results could be applied by water businesses to improve websites. However, the usefulness of a website mystery shopper style exercise would be contingent on the development of a standardised and objective assessment process (Barwon Water, Central Highlands Water).

Westernport Water noted that the exercise could identify shortcomings that would require substantial investment—the cost of which would ultimately be borne by customers. Westernport noted that the customer satisfaction survey could provide a lower cost method to assess website effectiveness, while also providing information on what customers value.

Barwon Water also noted that—while the website mystery shopper process has merit in gaining insight into customer useability issues—website visits still account for a small percentage of overall customer contact.

South East Water expressed the view that introducing a service standard in this area would mean that 'the Commission is taking a role in determining what businesses should and should not put on their web site', rather than website content and functionality being driven by customers.

Working group

There was general agreement on the idea of reviewing customer satisfaction with the website of each water business. The comment was made that some customers may be older and do not use the website—this could mean that even if their website is good, it may not customer satisfaction.

Response

It is our view that the development and maintenance of websites—such that they provide information that is timely and relevant—is of growing importance. While we recognise that websites are one of several communication channels, the demands of water customers on websites are increasing—consistent with customer and technological sophistication.

While we note that customer satisfaction surveys could measure individual responses regarding website utility, 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.

We anticipate that the outcomes of such a process would provide useful and meaningful data to water businesses regarding areas that could be improved. 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.

Draft recommendation

We commissioned Customer Service Benchmarking Australia (CSBA) to undertake a pilot study of the websites of 16 water businesses. This will provide us with the opportunity to:

- establish clear, objective and replicable criteria on which assessment will be based.
- test the website mystery shopper approach—both the process and results—for relevance and meaningfulness with the water sector.
- identify the cost effectiveness of the process.

Results of this study will be made available to all businesses. On this basis we are:

- proposing the formation of a working group to consider this and other customer service indicators.
- considering the inclusion of this indicator in performance reporting during the third regulatory period—subject to working group outcomes.

CRS 2 – First call resolution

Comments on first call resolution (FCR) identified the complexity and difficulty associated with the implementation of this type of measure. The theme was that measurement and performance targets regarding FCR need to be realistic, as not all queries can be resolved on the first call.

Barwon Water. Lower Murray Water and Westernport Water supported the proposal in principle, but identified issues with data capture and costs of implementation—for instance changes to customer relationship management (CRM) systems, measurement and performance targets. South Gippsland Water and Goulburn Valley Water identified that there could be issues for smaller businesses that do not operate call centres—particularly with data capture. South Gippsland Water noted the customer satisfaction survey could collect similar information.

Western Water expressed similar views, noting that significant resources would need to be devoted to capturing accurate and reliable data—presupposing a clear definition of what would be incorporated in a measure of FCR. They noted that in the United Kingdom, OFWAT (the Office of Water), had developed a FCR measure which utilised a consultative approach to developing a weighted measure of what customers identify as FCR.

South East Water noted that often resolution required field crew rectification and noted that faults reporting should be excluded from the measure.

CUAC noted that measuring and focusing on FCR could reduce the number of the Energy and Water Ombudsman (Victoria) (EWOV) enquiries.

Working group

The working group discussion mirrored the views expressed in the submissions. Participants noted that:

- this indicator would provide value, but there was no agreement on how 'resolution' should be defined and measured.
- calls on faults should not be included in the measure as there is no way that an operator can resolve such an issue.
- the customer satisfaction survey could be utilised to capture similar data.

Response

We believe that the inclusion of a measure of first call resolution is an important part of reflecting a businesses' ability to satisfy customer expectations.

This view has not been reached in isolation—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. Customers clearly stated that they value the ability of call centres to respond to a customer query or problem with an answer—not necessarily a solution to an issue. The Hall & Partners|Open Mind report is available on our website. For more on the potential implications of this report see section 1.9.

Draft recommendation

We will pursue the inclusion of a FCR measure in performance reports in the third regulatory period. On this basis we are:

- proposing the formation of a working group to consider this and other customer service indicators.
- asking that customer service managers submit details on how—or if—they currently measure issue resolution.
- going to explore how the United Kingdom/OFWAT define and measure this indicator.

CRS 3 – Net promoter score (NPS) or Customer effort score (CES)

Submissions on the proposal to incorporate NPS or CES generally identified that:

- NPS was not relevant from a monopoly service provider perspective (Barwon Water).
- CES is a better option than NPS (Central Highlands Water, CUAC, South East Water, Western Water). Western Water and South East Water noted that the same information could be gained through the annual customer satisfaction survey.

South East Water noted that they use NPS for internal reporting purposes. Westernport Water did not support the consideration of either measure. Lower Murray Water noted that this was close to overlapping in areas covered by CRS 2.

Working group

There was general consensus within the working group that that the CES is a better measure than the NPS when applied in the context of the regulated water sector. However concerns with implementation, privacy issues and sample size were raised.

Response

Based on feedback we intend to explore the potential of including a CES measure—or incorporating similar measures in the customer satisfaction survey— during the third regulatory period.

Draft recommendation

We will pursue the development of a CES measure with the aim to include this in performance reports released in the third regulatory period. On this basis we are:

- proposing the formation of a working group to consider this and other indicator customer service indicators.
- asking that customer service managers submit details on how—or if—they currently measure or collect data on CES or NPS and how this data is used.

CRS 4 – Customer satisfaction survey

The proposal to develop common questions to incorporate in annual customer satisfaction surveys—and used to compare customer satisfaction across the sector—raised a mixed response in submissions.

Barwon Water, Central Highlands Water, CUAC, Lower Murray Water and South East Water agreed with the concept. South East Water noted that this approach could also address issues raised in relation to our proposals around CRS 1, CRS 2 and CRS 3.

Westernport Water were concerned that developing a common set of questions may result in a generic data set focused on comparing organisations within the sector rather than providing information on how each business could improve to meet the needs of its customers. Western Water identified methodological elements that would require control in order to produce a meaningful comparative result.

The Environmental Protection Agency (EPA) noted that there was no proposal to include measures around hardship and encouraged us to undertake further analysis and develop an indicator that measures 'the correlation and/or impact of hardship on the level of services provided for customer, environment, and human health protection'.

Working group

The working group identified potential benefits that a set of common questions could bring to the customer satisfaction survey. It was also noted that many businesses already use the customer satisfaction survey to compare results. The working group was keen to explore the potential of the Commission acting to co-ordinate and develop this proposal.

Response

We will explore the development of a set of standard questions to include in customer satisfaction surveys. We do not propose to independently manage the customer satisfaction survey on behalf of each business. Regarding the measures proposed by the EPA, we welcome any additional material that would assist stakeholders to consider the merits of the proposal.

Draft recommendation

We will pursue the development of a set of standardised questions to include in customer satisfaction surveys—and inform performance reports—over the third regulatory period. On this basis we are:

- proposing the formation of a working group to consider this and other customer service indicators.
- asking that customer service managers consider the indicators that they currently use to compare their own business to other businesses as candidates for standardisation.

1.2 Usage, price trends and payment management

UPP 7 – Physical visits

The measurement of physical visits—or the attendance of a water business representative to a residential customer's property to discuss non-payment for services provided—was proposed as a new measure in our discussion paper.

While CUAC supported the proposal—and some businesses indicated that information required to meet the requirements of this measure was available (Barwon Water, Lower Murray Water and Western Water)—most submissions identified that a measure of the physical visits would not be effective as:

- the physical visit numbers will not tally with the number restricted, or having legal action underway (Westernport Water).
- the cost of physical visits in regional areas is high and the level of complaints to EWOV regarding water restriction for non-payment is low (Goulburn Valley Water).
- a measure of physical visits is a compliance—rather than a performance issue—complicated by interpretation of whether a high number of physical visits is a good outcome (South East Water).

Working group

The working group discussion echoed the themes outlined in submissions—primarily that physical visits can be for a range of reasons including (but not limited to) non-payment or legal action. Consequently they identified that the physical visits will not reconcile with the number of restrictions that occur.

EWOV noted that—irrespective of this—it is important for businesses to keep details of their physical visits. This provides EWOV with additional evidence that appropriate payment management processes and actions have been taken, and simplifies the assessment of compliance with guaranteed service level (GSL) process requirements.

The working group suggested that the definition could be changed to include 'restrictions' and the term 'and/or legal action'.

Response

The addition of this indicator to the performance report was proposed because a hardship guaranteed service level will be rolled out to all 16 urban retail water businesses from 1 July 2012.

In discussions with EWOV we have found that it is difficult to identify whether water businesses have complied with the guidance provided by the reasonable endeavours checklist regarding customer contact.

Draft recommendation

Consistent with the final decision relating to the implementation of a hardship related GSL measure, we are proposing the addition of 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.

We are proposing the incorporation of a measure of relevant total physical visits in the performance indicator data set from the 2012-13 reporting period.

Identifier	Performance indicator	Split	Coverage	Performance measure
UPP 7	Physical visits	Residential	Regional and Metropolitan	The total number of physical visits made by water business representatives associated with restrictions due to non-payment, hardship and/or legal actions
Definition				
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.				

1.3 Financial information

In our discussion paper we proposed the inclusion of five financial indicators in the performance reports—Funds from Operations (FFO) interest cover (times), Internal financing ratio (%), Net Debt payback (years), FFO/net debt, Net debt/Regulatory Asset Value. This proposal drew a mixed response in submissions.

CUAC noted the positive impacts that would result from presenting financial information simply and consistently. Melbourne Water and Goulburn Valley Water supported the indicators as proposed, Goulburn Valley Water citing that they were relevant and meaningful to users of the water performance report. Western Water noted that the data was available. Melbourne Water noted that issues associated with timing and replication would need to be reviewed.

The majority—Barwon Water, East Gippsland Water, Lower Murray Water, Westernport Water, South East Water—were less supportive. While they each acknowledged that the information was available—or could be acceptable as measures—a range of issues were identified:

- the cost of changing systems (Westernport Water).
- the duplication of information already available (Barwon Water, South East Water, Westernport Water).
- the potential that regulatory financial information might confuse or be misinterpreted by stakeholders when regulatory data is compared to VAGO reports or annual reports (Barwon Water, East Gippsland Water, South East Water).

Working group

The themes expressed in submissions were mirrored in the working group discussion. It was acknowledged that this information—as well as information tracking expenditure and revenue forecasts against actual results—would be useful to stakeholders.

Response

The inclusion of financial indicators in performance reporting is not without precedent within Australia or globally and can provide additional contextual information to readers of the performance report.

For instance, the Independent Pricing and Regulatory Tribunal of New South Wales (IPART) incorporate in their annual performance reports financial indicators and comparisons of revenue and expenditure outcomes with those forecast at the start of a regulatory period. In contrast, OFWAT prepares a separate report on financial performance and expenditure.

While feedback to our proposal generally pointed out concerns with the interpretation of financial information, the ability to report the information was not in question.

Draft recommendation

We will investigate the presentation of financial information—including the comparison of forecast and actual expenditure profiles—in a report separate to the performance reports in the third regulatory period.

Issues associated with the timing of receipt of financial information preclude the inclusion of this data in the performance reports. The data required to do this analysis is available from our regulatory accounts; any additional financial data requirements can be sourced through the regulatory accounts process.

On this basis we are:

- proposing the formation of a working group to consider the development of a report focused on financial and other relevant indicators—necessarily separate from the performance reporting process—to take effect during the third regulatory period.
- going to explore how other regulators define, measure and report on these indicators.

1.4 Resource security

Submissions that addressed resource security highlighted a range of general and specific points for consideration. East Gippsland Water—reflective of the themes expressed by many businesses in submissions and the working group—noted that:

> *whilst the aim of including indicators of water corporation's water resource security is an understandable objective, the measure is very much a function of individual water supply system characteristics and constraints, the water corporation's level of service (in relation to security of supply) and each Water Supply Demand Strategy (WSDS).*

The WSDS process—administered by DSE—was identified as having more relevance and meaning than a security of supply measure or measures conceived and administered by the Commission. CUAC noted that resource scarcity was an issue.

Working group

The themes expressed in submissions were mirrored in the working group discussion. Responses to the resource security proposals—as provided in submissions and via the working group—are summarised in table 1.2.

Table 1.2 Resource security indicators – summary of responses

Identifier	Indicator	Response
SEC 1	Supply volume available to meet demand volume (ML)	The majority of this information is prepared and undertaken as part of the Water Supply Demand Strategy (WSDS) which is a requirement of DSE (Barwon Water, East Gippsland Water, Western Water, Westernport Water). Relevance of this measure questionable as: There are multiple internal and/or external sources of supply with a great deal of supply variability (Barwon Water, Lower Murray Water Westernport Water). Forecasting future inflows from a range of potential sets of inflow sources—with different supply dynamics—is not possible (Melbourne Water). There is limited scope for comparison as consequences for running out of water differs across the state (Melbourne Water).
SEC 2	Demand versus	The majority of this information is prepared and undertaken as part of

Identifier	Indicator	Response
	sustainable yield	the Water Supply Demand Strategy (WSDS) which is a requirement of DSE (Barwon Water, East Gippsland Water, Western Water, and Westernport Water). All businesses queried the definition of the term sustainable. Westernport Water and Central Highlands Water noted that sustainable yield is an historical measure and does not change. Barwon Water noted the measure is complex and relies on assessing each water source individually in a way that best deals with the economic, social and environmental factors associated with use. Melbourne Water noted that a challenge associated with this measure is the uncertainty surrounding the yield of a particular water supply system, which is driven primarily by the uncertainty surrounding the future impacts of climate change…and uncertainty surrounding long-term projections of future demand.
SEC 3	Independent supply systems	The majority of this information is prepared and undertaken as part of the Water Supply Demand Strategy (WSDS) which is a requirement of DSE (Barwon Water, East Gippsland Water, Western Water, and Westernport Water). EPA recommend that the definition of 'recycled Water' is clarified as it is currently unclear whether this includes recycled sewage, rainwater, stormwater and/or industrial water. Separate information should be captured on each of these independent supply types.

Response

The proposal that we include resource security measures in the performance report was based on commitments made in the development of the original reporting framework. Subsequent to the release of the discussion paper, the Government responded to the *Living Melbourne, Living Victoria Implementation Plan* provided by the Ministerial Advisory Council. The Implementation Plan identified that the Commission would have a role in reporting resource security measures as developed by the sector.

With regard to resource security we note that a great deal of information is currently collected by DSE through the WSDS process. Furthermore, DSE is forming a working group to further develop measures directly relevant to resource security.

Draft recommendation

We recommend that the sector and other stakeholders—including the Commission—work with DSE to advance development of resource security measures. Once agreed, these measures—as defined and collected by DSE—which may be included in the Commission's performance report.

1.5 Productivity

Consideration of our proposal to include productivity measures in the annual performance report drew comments from a number of stakeholders. While there did not appear to be an issue regarding the concept from the aspect of businesses—that there is a quantitative relationship between output and input—there was concern to ensure that definition issues and consideration of contextual information inform the development and implementation of any productivity measures.

CUAC supported the concept and identified that work in the energy sector by the Productivity Commission bore some relevance to our process. Most business submissions directly addressed the proposals provided in the discussion paper; East Gippsland Water proposed an alternative measure—the cost per megalitre of water treated at all sites, including comparison of energy consumed in—and dollars generated—from that process.

Working group

The working group identified a number of issues similar to those identified in submissions. In relation to PRO 1 participants noted that the proposal was seen as an effective measure of efficiency, and raised the impact that economies of scale would have on such a measure, particularly for regional businesses. An alternative measure of productivity—such as “cost per megalitre of water produced” or “cost per megalitre of water treated”—was offered as an alternative as the Department of Sustainability and the Environment (DSE) collects data on the volume of water produced.

Discussion about PRO 2 revolved around operational issues—in particular the appropriate allocation of administrative costs between domestic and non-domestic functions. The working group identified that this measure would lead to metropolitan businesses being seen to be better than regional businesses

Responses to the productivity proposals—as provided in submissions— are summarised in table 1.3.

Response

The inclusion of productivity indicators as part of performance reporting can provide additional contextual information to readers and additional means for comparison across businesses. We are keen to further explore the potential of the inclusion of productivity indicators—as proposed, amended or suggested—in future periods.

Draft recommendation

As there was general support for the proposal to include productivity measures—such as those used by IPART—we will continue to develop the concept for a roll-out in the third regulatory period. Much of the information required to develop partial productivity measures is already collected by us through the regulatory accounts process. However— as we receive audited financial information that cannot be accommodated in the December release of the performance report— we will work to develop a separate report with the view to a March release date.

On this basis we are proposing the development of a report focused on productivity and other relevant indicators—necessarily separate from the performance reporting process—to take effect during the third regulatory period.

Table 1.3 Partial productivity indicators – summary of responses

Identifier	Indicator	Response
Productivity (PRO)		
PRO 1	Operation maintenance and administration (OMA) costs per customer	Information relatively easy to monitor and collect (Barwon Water, Western Water), but is not collected on the basis of proposed split between domestic/non-domestic (Goulburn Valley Water). Comparisons across businesses will need to account for the impacts of: Related party contracts/partnerships (Barwon Water). Residential commercial mix (Goulburn Valley Water). Economies of scale (East Gippsland Water). The measure may act as a disincentive to businesses undertaking ongoing preventative maintenance (Westernport Water). Costs can be out of the control of the business (Lower Murray Water) The applicability of the measure to Melbourne Water would result in a less than informative outcome—this could be overcome by comparing Melbourne Water to similar businesses globally.
PRO 2	Cost to serve ($ per customer)	Information relatively easy to monitor and collect (Barwon Water, Western Water), but is difficult to/not collected on the basis of proposed split between domestic/non-domestic (Barwon Water, Goulburn Valley Water) or at the proposed level (Central Highlands Water). Businesses noted it will be important to: Establish definitions particularly of customer facing activities (Barwon Water, Goulburn Valley Water, Lower Murray Water, Smith, and Western Water). Recognise the importance of including contextual information (Goulburn Valley Water, Western Water) including economies of scale (East Gippsland Water). The applicability of the measure to Melbourne Water would result in a less than informative outcome—this could be overcome by comparing Melbourne Water to similar businesses globally. Smith noted that a purely 'administrative cost per customer' measure might be more useful.

1.6 Trade waste

To assist us in our monitoring and compliance role the discussion paper proposed the consideration of two additional trade waste specific performance indicators:

1. TDW 1 – Number of sampling activities
2. BED 19 – Volume of trade waste collected (ML).

TDW 1 – Number of sampling activities

While Barwon Water and Westernport Water indicated that inclusion of this indicator would not impose an additional burden, several businesses raised points for clarification. The points raised—and our responses—are summarised in table 1.4.

Working group

Working group 1 reviewed the proposed indicator and associated definitions, noting that the indicator required further clarity on terminology and methodology.

In particular, the working group noted that the indicator should measure whether a business is meeting all sampling requirements. Several participants agreed that the measure should be changed to capture information on whether a business is complying with sampling schedule and/or commitments included in all trade waste agreements.

Table 1.4 TDW 1 – summary of submission and response

	Submission	Response
Goulburn Valley Water	Not all water businesses will have forecasts of number of trade waste samples for a year.	We would expect that—where a business has committed to a sampling program—there will be a form of scheduling and tracking system in place.
South East Water Lower Murray Water	Questions the value of this measure as there is no relationship between: 1) the number of samples' taken at a customer's premises and the annual trade waste fee 2) the number of samples and the level of compliance.	We understand that: 1) there may be no direct link, but costs would be included in the annual fee 2) we agree with this point as there is a potential that the results could result readers to a misleading conclusion. To avoid this we are only concerned with scheduled—rather than non-scheduled—samples
South East Water, Western Water	The objective is to ensure that customers remain compliant with their trade waste agreements. Water businesses are best placed to assess the assistance a customer needs, which may take a number of forms.	We are of the view that customer compliance does not reflect directly on the performance of a water business. Sampling—in particular the fulfilment of samples as scheduled—is within the control of the businesses. In addition, we are not in a position to measure or assess the level of assistance a water business provides to a customer. Consequently we are not proposing to measure the degree of assistance provided.
East Gippsland Water	Questioned whether this measure is being developed to address only those agreements that specify a sampling regime i.e. large trade waste customers.	We have proposed that this indicator applies only where a trade waste agreement is in place—and with it a specified sampling frequency/schedule. This will not apply to minor trade waste customers that do not have a specific trade waste agreement and sampling schedule specified.
	Would like a definition of commercial and industrial customers.	This is not relevant—it is the presence of a trade waste agreement that defines the characteristics of the customer.
EPA	Consider measuring enforcement activities taken against non-compliant samples.	We are of the view that customer compliance does not reflect directly on the performance of a water business. In addition we are not in a position to measure or assess the level of assistance a water business provides to a customer. Consequently we are not proposing to measure enforcement activities.

Response

We have reviewed the comments and issues raised with the indicator as presented in the discussion paper. Based on the feedback we have withdrawn the proposal to include this as a new indicator.

Draft recommendation

We will not include TDW 1 as an indicator in performance reports.

BED 19 – Volume of trade waste collected (ML)

Submissions on this indicator noted generally that this information was readily available and already collected (Barwon Water, Lower Murray Water, Western Water). Westernport Water supported the measure but sought clarification regarding how the information would be used. South East Water noted that:

> *'It is not possible to report on the total volume of trade waste received as customers other than major trade waste customers are not metered'.*

Response

This new indicator uses data already captured in the templates, and results in a snapshot figure reported in the overview section of the data templates. We note that South East Water already reports trade waste received into each of their treatment plants—and provide Melbourne Water with amounts sent to the eastern and western treatment plants.

Working group

The working groups did not note any significant issues.

Draft recommendation

We will include BED 19 as an indicator in performance reports from the 2011-12 reporting period.

1.7 Innovation

Discussion on innovation drew a wide and varied range of responses, all making the point that—even with the guidance of assessment criteria—the measurement of innovation is a difficult and subjective process.

- Barwon Water noted that their internal innovation program measures success by reviewing the rate of employee participation in the program, the number of innovations and ideas implemented, and the financial implications.
- CUAC – were not persuaded that an innovation measure is necessary as a performance indicator.
- EPA – agreed with including the concept, and noted that innovation measurement could be applied to a range of categories or services— for example environmental, financial, social, or waste management, resource efficiency.

- Melbourne Water – has had a corporate Key Performance Indicator (KPI) for innovation in place since 2011/12 based on a self-assessment survey. They support that innovation should add value to the organisation either across the Triple Bottom Line (financial, social, environmental) but that it can be intangible across these three dimensions.
- South East Water – noted that innovation is not something you can measure as a service standard or results compared from business to business in the form of a KPI.
- Western Water – identified that data would be difficult to collate, but suggested a number of potential measures—for example:
    - the number of ideas proposed and implemented as a percentage of all ideas received
    - value created net of costs (expressed per customer?)
    - development of a benefits index to identify areas that have shown net non-financial improvements as a result of initiatives—for example lower GHG emissions, increased biodiversity benefits.

Working group

The working group discussion echoed the themes contained in the submissions, and supported the concept of having a section in the performance report—or a section included in the document associated with financial indicators and productivity indicators—dedicated to showcasing the innovative ideas businesses have implemented.

Response

As highlighted in the consultation process, the identification and quantification of innovation is difficult. The subjective nature of determining what is innovative—as well as the often delayed results of an innovative action—only serve to cloud the measurement and assessment process.

One approach to incorporating innovation in the annual performance report that we believe could be considered is through the development of a peer review process.

Co-ordinated by us, water businesses could nominate programs or initiatives they believe represent the concept of innovation. Utilising agreed upon criteria—such as that proposed by our Chairperson[1]—a group of industry peers could then review the proposals. Where the group agrees that the initiatives meet the criteria, a case study of the program and results could then be included in the performance report.

[1] Dr Ron Ben-David (2011), *Economic regulation of the water sector: Presentation to the VicWater Annual 2011 Conference*, 8 September 2011.

Draft recommendation

Subject to consideration of our proposal, 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.

1.8 Additional new proposals

CRS 12 – GSL payments (No.)

Working group

In the discussion about REW 7 (Water supply customer interruptions) some working group participants raised issues associated with supply interruptions and GSL payments. Water business representatives indicated that their GSL payment policy—and the associated definition of interruption—did not necessarily reflect a customers' experience or perception of inconvenience. For instance, some businesses make an automatic GSL payment when a scheduled interruption goes over the indicated time—regardless of whether a customer does or does not register a complaint. Other businesses make a payment only where a complaint is registered.

On this basis some noted that businesses could:

- record a GSL only where a customer reports a disturbance—requiring a redefinition of the term interruption.
- measure the number of GSL payments made by each water business in a reporting year to assess the materiality of the number of GSL payments, noting that we already report the total dollar amount of GSL payments.

Response

While each business has established a time related basis for determining when a GSL payment should be made, we do not agree that the definition of interruption should be amended. Amendment of the term interruption would require a far more complex approach to determining the extent—perceived or otherwise—of customer inconvenience. This approach could potentially lead to the GSL scheme—and related payments—being treated as a form of compensation for interruption. This is not the intent of the GSL scheme; rather the GSL scheme was established as an incentive framework for water businesses to address areas of poor performance.

As requested, we are happy to include the total number of GSL payments made per annum. We note that this information should be readily available as the dollar amount of GSL payments made is already captured by each water business.

Draft recommendation

We will include a new indicator—CRS 12—to capture information associated with the total number of GSL payments made each year by each water business.

Identifier	Performance indicator	Split	Coverage	Performance measure
CRS 12	GSL payments (No.)		Regional and Metropolitan	Total number of GSL payments made.
Definition				
The total number of GSL payments made to customers per year.				

1.9 Further recommendations

As part of our commitment to improving the performance reporting framework, we commissioned Hall & Partners|Open Mind to study customer perceptions of water businesses and identify what aspects of customer service are valued and useful in a performance reporting framework.

While we focused on the implications for our performance reporting, the open-ended nature of the research meant that participants raised points that could be considered by businesses in their own communication and reporting strategies.

For instance, indicators which allow customers to reference their usage or bills with peers were considered to be more engaging—such as key consumption measures that considered a postcode, or comparisons with interstate peers. Other themes to emerge were that direct communication channels—such as communicating through water bill inserts —were most preferred. While customers were generally passive when seeking information, they were still interested in receiving the information.

We encourage water businesses to review and consider the implications of the findings made by Hall & Partners when developing and assessing their own communication strategies.

2 PROPOSED INDICATORS FOR REMOVAL

In our discussion paper we proposed 9 indicators for removal or partial removal from the indicator list. The working group discussed and agreed to these changes. The working group proposed one additional indicator as a candidate for removal—CRR 2 (Effluent reuse – water resource management)—discussed below. Table 2.1 shows the indicators that are proposed for removal—either in part and/or in full.

Through submissions and the working group process we have worked to identify 11 indicators that could be removed from the reporting framework. We are seeking further information on each of these proposals.

Table 2.1 Current indicators – for full or partial deletion

Identifier	Indicator	Outcome
Baseline explanatory data (BED)		
BED 13	Water treatment plants: Disinfection, unfiltered; Further treatment; Full treatment	Modify as proposed to full treatment only.
Water network reliability and efficiency (REW)		
REW 4	Bursts and leaks fully rectified	Remove as proposed.
REW 6	Water supply interruptions restored within 3, 5 & 12 hours	Modify as proposed to 5 hours only.
REW 12	Water Pressure (Bulk Supplier)	Remove as proposed.
Sewerage network reliability and efficiency (RES)		
RES 5	Customers receiving 1, 2 , 3, & 4+ sewer blockages in year	Modify as proposed to 3 blockages only.
Customer responsiveness and service (CRS)		
CRS 12	Property development agreements	Remove as proposed.
CRS 13	Information statements turned around in 5 days	Remove as proposed.
Water conservation, reuse and recycling (CRR)		
CRR 2	Effluent reuse - water resource management	Remove as proposed by working group.
CRR 8	Trade wastes priority parameter	Remove as proposed.
Drinking water quality (DWQ)		
DWQ 1	Standards for drinking water quality	Remove Melbourne Water as proposed.
	Remove ‘disinfection by-products’ from the definition	Remove section as proposed.
Waterways and drainage (WWD)		
WWD 3	Development applications	Remove in line with CRS 12 and CRS 13.

2.1 Additional removal proposals

CRR 2 – Effluent reuse – water resource management

Working group

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. All agreed that CRR 2 should be removed from the indicator list.

Draft recommendation

As requested, we will remove CRR 2 from the indicator list as this information is already captured in CRR 1.

DWQ 1 – Standards for drinking water quality

Proposed approach

In our discussion paper we proposed to remove reference to:

- Melbourne Water from ‘Coverage’ and implement associated changes to ‘Performance measure’ and ‘Definition’ components of the indicator.
- ‘Disinfection by-products means trihalomethanes, monochloroacetic acid, dichloroacetic acid and trichloroacetic acid’ and ‘disinfection’ contained within the indicator’s ‘Definition’.

Submissions

The Water Industry Operators Association (WIOA) noted that we made no reference to “safe drinking water” or “pathogens”, but instead emphasised colour and turbidity as contaminants for removal. The WIOA noted that colour and turbidity have never alone caused illness; rather it is pathogens that must be managed. Further, they noted that no reference was made to Cryptosporidium or Giardia.

East Gippsland Water submitted that the removal of water quality parameters was appropriate, but noted concern with the duplication of—and timing associated with—reporting on regulated parameters with the Department of Health (DH). They proposed an alternative indicator—instance 'the number of Safe Drinking Water Regulatory Audits completed in the period', with 'the percentage of Safe Drinking Water Regulatory Audits passed in the period' as the measure—that would not over-simplify reporting on water quality.

Working group

The working group agreed to the removal of Melbourne Water from 'coverage' in the definition.

Reporting of 'disinfection by-products' was discussed, and it was highlighted that this data is reported in the DH reports, which raised the question whether businesses need to continue to report information to us as well as DH, or whether we could source the information from DH. Issues associated with the consistency, accuracy and timing of the receipt and release of information was raised, but it was noted that this would be best dealt with at an agency level.

Similar to the issues raised by East Gippsland Water, it was suggested that the processes of ensuring water quality be measured and not the results, for example by measuring the number of drinking quality risk audits completed.

DH also queried the terminology 'zones' that is utilised in the definition. They noted there was a need for the Commission, DH and the National Water Council (NWC) to align this definition, as well as for the definition of 'disinfection by-products'.

Clarification was sought regarding the '% of population receiving water' referred to in the definition, which was clarified as being the same as the number of connections.

Response

Subsequent to the working group, DH provided us with the following information:

- The use of the term 'Zones' is common terminology and they recommend keeping it, but clarifying what a locality is in the definitions.
- DH can provide us with data in November, in time for inclusion in our reports.
- DH agreed that the definition should refer to the Safe Drinking Water Act 2003 and the Safe Drinking Water Regulations 2005.

We are of the view that the utilisation of DH data should reduce the overlap in reporting requirements. We also view that the alignment of the definition with the Safe Drinking Water Act should address any concerns associated with ensuring the recognition of 'safe' drinking water in our reporting framework. Any additional health related information beyond turbidity and E. coli should be sourced from DH.

Draft recommendation

Based on the information received in submissions and the working group process we propose to:

- proceed with removal of Melbourne Water from the 'coverage' section of the definitions.
- proceed with removal of 'disinfection by-products' from definition.
- change definition from 'population receiving drinking water' to 'number of connections receiving drinking water'.
- align the definition for water standards and locality with those used by DH.
- work with DH to gather data directly from them. Data collection will continue as normal until this is tested and working well.

Identifier	Performance indicator	Split	Coverage	Performance measure
DWQ 1	Standards for drinking water quality		Regional and Metropolitan	Number of connections receiving water meeting standards. Number of localities meeting standard.

Definition
Number of connections receiving drinking water that complies with the standard for E. coli, 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 population.
Note: A zone is equivalent to a water sampling locality as defined in the Safe Drinking Water Regulation's 2005.

3 PROPOSED INDICATOR MODIFICATION

In our discussion paper we proposed that modifications should be made to 6 indicators. In addition we identified a range of minor 'house-keeping' modifications should be made to correct minor errors, inconsistencies and/or omissions in the definitions, measures and/or data templates.

Submissions on each of these were received from a range of stakeholders, and issues were discussed by the working group. Table 3.1 shows the indicators and the outcome of the discussions on the more significant proposed modifications. Table 3.2 and table 3.3 outline the conclusions reached on the minor amendments.

Our discussion paper proposed modifications to 6 indicators and a range of house-keeping amendments.

Table 3.1 Current indicators – modify proposals

Identifier	Indicator	Outcome
Water network reliability and efficiency (REW)		
REW 7	Water supply customer-interruptions (No.)	No change.
REW 10	Customers affected by planned water supply interruptions greater than 5 hours	Modify with minor amendments.
Usage, price trends and payment management (UPP)		
UPP 1	Instalment plans	Modify as proposed.
Customer responsiveness and service (CRS)		
CRS 7	Affordability complaints	Modify with minor amendments.
CRS 8	Billing complaints	Combine as proposed.
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.

3.1 Additional modification proposals

REW 7 – Water supply customer interruptions (No.)

Proposed approach

In our discussion paper we proposed to change the indicator's:

- 'Split' by including reference to 'Planned: Longer than advised or notified'.
- 'Definition', which will need to reflect the addition of 'Time advised or notified'.

Submissions

Barwon Water agreed that this indicator would be a good addition to the data set, although they queried why the split is linked to customer interruptions (frequency) rather than time taken to restore.

Working group

The working group noted that this measure:

- disincentivises the business and encourages them to overestimate planned interruption times. They noted that it may create the wrong incentives—for example, a business may need to interrupt supply to ensure that maintenance can be undertaken to reduce unplanned interruptions. It was noted that a proactive approach may result in a poor outcome on this indicator.
- was difficult to monitor and that there are many contributing factors that are often out of the businesses' hands. For example—developers get a set time frame to complete works, if they go over it is not within the businesses' control.

Discussion then turned to the measurement of interruptions and GSL payments—this resulted in the addition of CRS 12 (refer to the discussion in section 1).

Draft recommendation

Based on the discussion and feedback we propose no change be made to this indicator.

CRR 3 – Volume of sewage spilt from emergency relief structures (ERS) and pumping stations (ML)

Proposed approach

In our discussion paper we proposed to change the ‘Performance indicator’ to include the number of events for each ‘Split’—Blockage, Hydraulic, Extreme wet weather, System failure.

Submissions

Barwon Water recommended omitting volume reporting as they have no nominated ERS's, which means reporting is limited to pumping station spills. While they can report the number of spill events by "split", there is difficulty quantifying with accuracy the volume of sewage.

The EPA agreed with the proposal, and sought the inclusion of ‘extreme wet weather’ and information associated with sewerage capacity design compliance with standards related to containing a rainfall event. They also recommended the volume indicator is more useful per event rather than overall percentage. All other submissions agree with the working group.

Working group

The working group generally agreed to change the indicator to include the number of events, as well as the volume of spills, for each split in the indicator

Draft recommendation

We will proceed with the change as proposed in the discussion paper and include a definition of ‘extreme wet weather’.

REW 3 – Time taken to rectify bursts and leaks

Submissions

The WIOA—consistent with the working group discussion—noted that the wording of REW 3’s definition should be changed to reflect ‘safe’ water reconnection:

> *The total job duration, from the time of receiving first notification, responding to and rectifying the fault to the time that safe drinking water is reconnected.*

Working group

The working group noted that the term 'required level of service' is not specific enough and were concerned to emphasise that this measure—and other similar indicators—should be amended to include the term 'safe water'. Some group members identified that a work order associated with jobs should have this included in a check-list which auditors have the ability to review. It was also noted that the measure should be minutes.

Draft recommendation

We will proceed to change the indicator to reflect 'safe' water reconnection by using the reference to the Victorian Safe Drinking Water Act 2003. The indicator set will be reviewed to include this reference where relevant.

Identifier	Performance indicator	Split	Coverage	Performance measure
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.

Definition
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 a drinking water supply, service of potable water must be restored. Potable water should comply with the Victorian Safe Drinking Water Act 2003. Follow-up rectification works, such as reinstatement of nature strips are not included.

CRS 4 – Water quality complaints

Working group

In the working group DH committed to review and report on water quality complaints received. They reviewed the most recent complaints data available—for the 2009-10 and 2010-11 reporting periods—and found that there were issues reported against each category—Discoloured water, Taste/Odour, Blue Water, Air in water, Suspected Illness, and Other.

On this basis DH were of the view that we maintain splits in our reporting, but that they be aligned with their categorisation. This view was supported by the businesses. As a means to simplify the reporting, the working group proposed that we collect the "total number of water quality complaints" and have the breakdown be collected from DH. We will work with DH to set up and test a system for collecting data directly from them.

Draft recommendation

Consistent with the approach proposed in the working group—and the earlier approach proposed for DWQ 1 (section 2)—we intend to:

- continue to collect data on the number of water quality complaints by split of colour, turbidity, odour and other.
- rely on—and refer readers to—DH data for any additional water quality information that they may require.

CRR 6 – Biosolid reuse

Submissions

The EPA sought to ensure that the definitions used by us are aligned with those used by them.

Working group

It was noted that the NWC had agreed to align the definition of biosolids with the EPA definition in April 2012. We propose to align our definitions to ensure consistency.

Draft recommendation

We will change the definition consistent with that used by the EPA. We note that the EPA) only allows stabilised solid to be used for reuse. Non stabilised sludge cannot be reused. This alignment avoids the inherent difficulty in accurately estimating accumulated sludge in lagoons in terms of dry weight of solids. Further, reporting biosolids reuse as a percentage of sludge produced may misrepresent the environmental and economic risk associated with biosolids management's. In addition the inclusion of sludge stored in lagoons over estimates the volume of biosolids available for reuse in the short term.

3.2 Amendments and clarifications

Table 3.2 Indicator amendments and clarification – monthly data

Identifier	Performance indicator	Proposed Clarification / Action	Outcome
RES 3	Total time taken to repair blockage/spill (Min.)	Definitions indicate measure is in hours – change definition to minutes.	Do not change template, change definitions to be minutes.
RES 6	Sewer spills from reticulation and branch sewers	Businesses should use definition as published for priority 1 and priority 2.	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 priority 2.	Businesses should use definition as published for priority 1 and 2 spills.
RES 9	Sewer supply customer-interruptions restored within X hours (No.)	This indicator is defined as not restored within 5 hours in definitions, should align to template – restored within x hours.	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.)	This indicator is included in the data templates but is not defined.	Not used – remove from template.
No reference	Sewer spills to customer properties restored within 5 hours	Remove from template as required.	Remove from template.
CRS 9	Pressure complaints	Change from pressure to flow rate complaints.	Change to flow rate.

Table 3.3 Indicator amendments and clarification – annual data

Identifier	Performance indicator	Proposed Clarification / Action	Outcome
BED 1	Water customers	Include split for recycled customers.	Recycled customers included in split.
BED 4	Trade waste customers	Split into industrial and commercial categories as per template.	Do not define - remove categories as not used.
BED 6	Length of water main (km)	Include split for recycled water mains.	Recycled water main included split.
BED 10	Metered volume of water delivered to customers (ML)	Include split for residential class A recycled water.	Residential recycled class A water included split.
BED 14	Volume of sewage collected (ML)	Split between Wholesaler and Treatment plant in definition as per template. Define categories.	Refer to national report definitions. No change to definitions required.
REW 9	Customers receiving 1, 2, 3, 4, 5, & 6+ water supply interruptions in year	Split into separate measures for each number of interruptions.	No change.
RES 4	Water main breaks	This is in the incorrect category and has been relocated as REW 15.	Move to correct category, indicator now REW 15.
No reference	Sewer spills from ERS and pumping stations (No.)	This indicator is included in the data templates but is not defined.	Indicator part of CRR3.
UPP 5	Debt levels for customer subject to restriction and legal action ($)	Amend definitions to recognise split of legal action and restriction categories.	Amend definitions to recognise split of restrictions.
UPP 6	Hardship grants	Businesses should report on their own hardship scheme, not the Department of Human Services scheme.	Clarify definitions to ensure businesses report own hardship scheme. This should just be a number and not per 100 customers.

In addition we will amend the following:

- 'Water consumption, reuse and recycling' will be consistently renamed 'Water conservation, reuse, recycling' (CRR).
- 'Drainage and waterways services' will be consistently referred to as 'Waterways and drainage' (WWD) (Melbourne Water specific).
- Affordability will now be referred to as 'Usage, price trends and payment management' (UPP).

4 NEXT STEPS

Based on feedback to this paper, we will produce a final report that will outline changes to the annual performance report data set. Where possible, changes to the performance report data set will take effect as soon as practically possible—these will be detailed in the final report.

Based on feedback to this paper, we will produce a final report that will outline changes to the annual performance report data set.

We invite feedback—in the form of written submissions—from all interested parties. Feedback should address the key questions raised throughout this paper. Submissions should be emailed and received by **Friday 13 July 2012** to water@esc.vic.gov.au. Alternatively submissions can be sent in physical form to:

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

Submissions will be made available to the public on our website, except for any commercially confidential or sensitive information. Any material that is confidential should be clearly marked as such.

APPENDIX A. PROPOSED INDICATOR SET

Table A.1 below presents the proposed new indicator set, which includes the changes recommended in the draft recommendations.

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.

This version of the performance indicator definitions document amends the definitions handbook released in 2012**.**

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	Drainage Customers		Melbourne Water	Context and normalising measure	For performance reporting purposes, a drainage customer is a property which receives a 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.	
WWD 2	River health		Melbourne Water	% achievement of annual targets assigned to Melbourne Water from the Regional River Health Strategy	The percentage achievement of annual targets based for each category of the Regional River Health Strategy assigned to Melbourne.	

APPENDIX B. SUBMISSIONS AND WORKSHOP PARTICIPANTS

Table B.1 Submissions to the discussion paper

Date received	
31 May 2012	South Gippsland Water
25 May 2012	Consumer Utilities Advocacy Centre
18 May 2012	South East Water
18 May 2012	Melbourne Water
14 May 2012	Environment Protection Agency
10 May 2012	Lower Murray Water
10 May 2012	Barwon Water
04 May 2012	Central Highlands Water
04 May 2012	East Gippsland Water
04 May 2012	Goulburn Valley Water
04 May 2012	Western Water
30 April 2012	Water Industry Operators Association of Australia (WIOA)
30 April 2012	Westernport Water
18 April 2012	Mike Smith

Table B.2 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.3 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