Non-Financial Performance Measures Rules 2013
Supporting guidance for drinking water (February 2014)

Introduction to the activity
A reliable supply of water that is safe to drink is essential for good public health. A good quality water supply brings many direct and indirect benefits to communities and the country as a whole by helping to prevent the outbreak and spread of water-borne diseases.

The performance measures will provide information on local authorities’ levels of service in providing drinking water. Being able to compare the levels of service provided by different local authorities will help communities to assess whether they need a better or lesser level of service.

The performance measures cover the following aspects:
1. Is the water safe to drink?
2. Is the water reticulation network being maintained to a standard that ensures safe water is available to customers?
3. Does the territorial authority responsible for the water service provide a timely response if there is a problem with the water supply?
4. Are customers satisfied with the service provided with both the operation of the service itself and how the territorial authority deals with complaints about the service?
5. Is the water supply system being managed in a way that ensures demand does not outstrip the available capacity?

Please note that where the term territorial authority is mentioned in this document, this can be taken to include council-controlled organisations (CCOs) who supply this service.

Do you need to apply the performance measures?
The performance measures will be used to report on territorial authorities and CCOs who provide drinking water supplies. This is because the measures are meant to provide information on services provided by local government rather than by private suppliers.

For the purposes of the mandatory performance measures, water supply includes treated drinking water supplies, such as:

- treatment plants, bulk conveyance and bulk storage;
- delivery reticulation to property boundaries, including reticulation storage; and
- trickle-feed supply systems.

Specifically, the following aspects of the supply of water are excluded:

- measures relating to resource consent for the water take into the system. This is because there are already legislated requirements, under the Resource Management Act 1991, for the issuing and monitoring of resource consents; and
• malfunctions of privately-owned infrastructure and connections. The measures are intended to provide information to members of the public on the services provided by their territorial authority so only those services for which their territorial authority is responsible should be included.

Reporting on results
It is good practice to report more than one year’s performance against particular performance measures. This allows ratepayers and other stakeholders to identify trends in the local authority’s performance. Territorial authorities are encouraged to maintain time series data for the performance measures and, where appropriate, graph the results. Where there are significant deviations between a target and the actual result, territorial authorities should include a commentary as to why this is the case. Also, in order to maintain continuity of trend data, local authorities may choose to report against both the new standard measures, and their previous measures for a few years.

In general, territorial authorities should ensure that they have appropriate systems in place to collect the information required to report against the performance measures.

Under the Non-Financial Performance Measures Rules 2013 any calculation, measure, number or percentage set out in the Rules must be calculated for a financial year.

Performance measure one (safety of drinking water):
The extent to which the local authority’s drinking water supply complies with:
(a) part 4 of the drinking-water standards (bacteria compliance criteria); and
(b) part 5 of the drinking-water standards (protozoal compliance criteria).

Introduction to measure
This performance measure informs ratepayers and consumers on whether the water supplied to them is safe to drink.

The New Zealand Drinking Water Standards (the Drinking Water Standards), which are set under the Health Act 1956 and monitored by the Ministry of Health, provide a recognised standard for public safety. The measure provides information to assist local government and communities in making decisions on an appropriate level of service, including whether they want a grade of water that meets, or exceeds, the Drinking Water Standards.
The measure focuses on contamination by bacteria or protozoa. Although the Drinking Water Standards set standards for other contaminants also, the focus of the performance measure is on the safety, rather than the overall quality, of drinking water. Chemical and other components of the Drinking Water Standards are therefore not reported in this measure as their effects do not represent an immediate risk to public health.

**Guidance for reporting**

Where there is more than one water supply in a city or district, best practice is that they should be reported on separately. The water supply extents are to be defined by the territorial authority based on the community serviced; for example town one, town two etc.

The results should be extracted from the National Water Information New Zealand (WINZ) database, administered by the Ministry of Health.

Territorial authorities may choose to provide further information on the level of compliance achieved.

If the results for bacteriological or protozoal compliance should be no then a commentary should be included as to why this is the case.

**Worked example**

<table>
<thead>
<tr>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacteriological Compliance</td>
<td>Bacteriological Compliance</td>
</tr>
<tr>
<td>Town One = Yes</td>
<td>Town One = Yes</td>
</tr>
<tr>
<td>Town Two = Yes</td>
<td>Town Two = No</td>
</tr>
<tr>
<td>Town Three = Yes</td>
<td>A planned upgrade of the water treatment plant was postponed and the plant was not able to deal with increased community demand. The upgrade will now occur in the next financial year.</td>
</tr>
<tr>
<td>Protozoa Compliance</td>
<td></td>
</tr>
<tr>
<td>Town One = Yes</td>
<td>Town Three = Yes</td>
</tr>
<tr>
<td>Town Two = Yes</td>
<td></td>
</tr>
<tr>
<td>Town Three = Yes</td>
<td>Protozoa Compliance</td>
</tr>
</tbody>
</table>

Town One = Yes
Town Two = Yes
Town Three = Yes

Department of Internal Affairs
DMS Library: LGS 3600-11 Document ID: 3905569DA
Performance measure two (maintenance of the reticulation network)
The percentage of real water loss from the local authority’s networked reticulation system (including a description of the methodology used to calculate this).

Introduction to measure
This performance measure provides information on the state and operation of a territorial authority’s water reticulation network infrastructure.

Water loss is a key indicator of the performance of a reticulated water supply. High levels of water loss may indicate that the reticulation network is in poor condition or that it is being operated inefficiently. Water lost from the reticulation network is a cost to communities and wastes a valuable natural resource.

Information provided by this performance measure will help communities and territorial authorities to decide whether improvements are needed to either operational systems or the water network infrastructure.

The performance measure does not directly measure water pressure. Issues with water pressure will be reported through performance measure four, covering customer satisfaction (specifically through the number of complaints about water pressure).

Guidance for reporting
Water losses includes real losses through leaks in the network and apparent losses through metering inaccuracies or water theft.

Separate guidance was issued in June 2014 for determining non-revenue water quantity for non-universally metered networks. This guidance was included with the existing guidance on the Department of Internal Affairs website.

Worked example

<table>
<thead>
<tr>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target real water loss from the local authority’s networked reticulation system ≤ 15%</td>
<td>Real water loss from networked reticulation system = 26%</td>
</tr>
</tbody>
</table>
Performance measure three (fault response times):
Where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times are measured:

a) attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site;

b) resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption;

c) attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site; and

d) resolution of non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption.

Introduction to measure
This measure shows how quickly a territorial authority attends to urgent problems with a water supply.

Measuring response time is a way of gauging whether a territorial authority is listening to its customers and providing solutions. An appropriate response to an urgent water supply outage is important because households and businesses require water to function, and without water a building can quickly become insanitary.

Guidance for reporting
This performance measure is to be reported as two, city or district wide assessments (counts), one for each type of response time.

For the purposes of reporting, the median of a finite list of numbers can be found by arranging all the observations from lowest value to highest value and picking the middle one (e.g., the median of \{3, 5, 9\} is 5). If there is an even number of observations, then there is no single middle value; the median is then usually defined to be the mean of the two middle values.

An urgent call-out is one that leads to a complete loss of supply of drinking water. A non-urgent call-out is one where there is still a supply of drinking water.

**Time to site** data will be collected as part of the territorial authorities (CCO or contracted) request for service (RFS) processes, and represents the time in which an appropriately qualified representative arrives at the incident site. The time starts from when the territorial authority is made aware of the fault, which is when it is within the territorial authority’s control. It is important that there are systems to record the information regarding when a representative arrives at the site. The territorial authority may also wish to provide further commentary regarding the response times.

When reporting on this performance measure territorial authorities should identify civil defence events. The impacts of such events should be discussed in reporting.
Worked example

<table>
<thead>
<tr>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Territorial authority target response to an urgent callout ≤ 60 minutes</td>
<td>Median response time to get to site for an urgent callout = 54 minutes</td>
</tr>
<tr>
<td>Territorial authority target to resolve an urgent callout ≤ 480 minutes</td>
<td>Median time to resolve the problem from an urgent callout = 265 minutes</td>
</tr>
<tr>
<td>Territorial authority target to respond to a non-urgent callout ≤ 660 minutes</td>
<td>Median response time to get to site for a non-urgent callout = 405 minutes</td>
</tr>
<tr>
<td>Territorial authority target to resolve a non-urgent callout ≤ 850 minutes</td>
<td>Median time to resolve the problem from a non-urgent callout = 550 minutes</td>
</tr>
</tbody>
</table>

Performance measure four (customer satisfaction):
The total number of complaints received by the local authority about any of the following:
(a) drinking water clarity;
(a) drinking water taste;
(b) drinking water odour;
(c) drinking water pressure or flow;
(d) continuity of supply; and
(e) the local authority’s response to any of these issues, expressed per 1000 connections to the local authority’s networked reticulation system.

Introduction to measure
This measure provides information on issues with a water supply and on how satisfied customers are with the way in which a territorial authority responds to requests to fix problems.

Customer satisfaction is a key measure of the quality of a service. Suppliers need to know whether customers are satisfied with the adequacy and reliability of the service they pay for.

The measure also provides data that highlights problems requiring attention, such as the need for upgraded or new infrastructure.
Guidance for reporting
This performance measure should be reported as a single, city or district wide assessment (count). Reporting on complaints per town or complaints by type is not required.

The number of water connections may be calculated from the number of customers charged in their rates (or otherwise specifically) for use of the reticulated water service.

The complaints data will be collected as part of the councils (or CCOs or contracted) RFS processes.

Where there is more than one complaint per event, each complaint is counted separately, not each event or occurrence. This records the public’s response to the event.

Worked example

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please note: the calculation does not have to be reported.</td>
<td>Target number of complaints ≤ 5 complaints per 1000 connections</td>
<td>Number of complaints = 14 per 1000 connections</td>
</tr>
<tr>
<td>Number of rated properties = 23,526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of water rated properties = 22,526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of complaints = 308</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculation for number of complaints per 1000 connections is 308 / (22,526/1000) = 14 (rounded to nearest whole number)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Performance measure five (demand management):
The average consumption of drinking water per day per resident within the territorial authority district.

Introduction to measure
This performance measure provides information on whether the water supply system is being managed to ensure demand does not outstrip capacity.

The performance measure will help communities and territorial authorities make informed choices on how they use their water resources. Careful management of the demand for water is an important component of integrated water resources management to ensure that demand does not exceed capacity, that water is allocated efficiently and that productivity is maximised.
A system that treats and transfers less water maximises the value of existing infrastructure. It costs less to construct and maintain, and uses fewer chemicals and less energy. Where there is increasing demand for water, managing demand provides a means for a community to defer investment in new water infrastructure through more efficient use of existing water resources.

**Guidance for reporting**

The performance measure should be reported as a single, city or district wide assessment (number).

Consumption is to be expressed as litres per person per day and based on estimated populations supplied by the treated water network at the time of reporting.

Some territorial authorities may choose to also report a peak season metric as population changes may vary significantly, such as beach towns, or ski areas during holiday periods.

**Worked example**

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Please note: the calculation does not have to be reported.</em></td>
<td>Target normal demand ≤ 400 litres/person/day</td>
<td>Normal demand = 382</td>
</tr>
<tr>
<td>Total water supplied (all plants/ sources) = 8,527,200,000 litres / year</td>
<td></td>
<td>litres/person/day</td>
</tr>
<tr>
<td>Normal population serviced = 61,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculation for normal demand is 8,527,200,000 / 61,200 / 365 = 382</td>
<td></td>
<td></td>
</tr>
<tr>
<td>litres/person/day (rounded to nearest whole number)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>