

# Guideline for Preparing a Water Efficiency Management Plan Outside South East Queensland

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Urban Water Policy and Management

Department of Environment and Resource Management

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# Contents

1. Introduction .....	1
1.1 What is a water efficiency management plan (WEMP)?.....	1
1.2 Aim of this guideline .....	2
1.3 Application of this guideline .....	2
1.3.1 When a WEMP may be required.....	3
1.3.2 Triggers for requesting a WEMP.....	3
1.4 Key roles and responsibilities.....	3
1.4.1 Water service provider .....	3
1.4.2 Non-residential customers .....	4
1.5 Application fee for approval of a WEMP.....	4
1.6 Additional supporting information.....	4
2. WEMPs overview .....	5
2.1 General details.....	5
2.2 Baseline water use and water source information .....	5
2.2.1 Sources of water .....	5
2.2.2 Current water use.....	5
2.2.3 Water use inventory.....	5
2.2.4 Baseline key performance indicator .....	6
2.2.5 Meters and data logging .....	6
2.3 Water use efficiencies and reticulated water savings .....	6
2.3.1 Non-residential customers with premises occupied by commercial buildings .....	6
2.3.2 Non-residential customers with premises used for other activities.....	7
2.3.3 All non-residential customers.....	7
2.4 Action plan.....	8
2.4.1 Non-residential customers with premises occupied by commercial buildings .....	8
2.4.2 Non-residential customers with premises used for other activities.....	8
2.5 WEMP sign-off by the non-residential customer’s organisation.....	9
3. Process for submission and approval of a WEMP.....	10
4. Reporting and review .....	11
4.1 Annual reporting requirements.....	11
4.1.1 Water service provider .....	11
4.1.2 Non-residential customers .....	11
4.2 Reviewing a WEMP.....	11
4.3 Amending or replacing a WEMP .....	12
4.3.1 Amending or replacing a WEMP by chief executive direction .....	12
4.3.2 Amending or replacing a WEMP by water service provider direction.....	12
4.3.3 Amending or replacing a WEMP by request.....	12
4.4 Notice to comply with a WEMP .....	12
5. Appeal rights .....	13
6. Glossary.....	14
7. Appendix .....	16

# 1. Introduction

The Guideline for Preparing a Water Efficiency Management Plan (the guideline) is prepared pursuant to the *Water Supply (Safety and Reliability) Act 2008* (the Act), which commenced on 1 July 2008.

The primary aim of the water efficiency management plan (WEMP) provisions in the Act is to promote water savings by non-residential customers of water service providers outside the South East Queensland (SEQ) region or outside a designated region<sup>1</sup>. The implementation of WEMPs by water service providers, and their non-residential customers, will deliver long-term efficiencies and savings for non-residential customers and will assist with long-term demand management outcomes for water service providers.

This guideline sets out the requirements for the various components of a WEMP and must be used by:

- non-residential customers when preparing a WEMP
- water service providers when assessing a WEMP.

The Act is administered by the chief executive of the Department of Environment and Resource Management (the department).

The Act can be accessed via the internet at <[www.legislation.qld.gov.au](http://www.legislation.qld.gov.au)>.

## 1.1 What is a WEMP?

A WEMP is a plan prepared by a non-residential customer that identifies water consumption and actions that will be taken by that non-residential customer to improve efficiency of water use.

In summary, preparing and implementing a WEMP involves:

- understanding water use on a premises by assessing current, historical and projected water use<sup>2</sup>
- identifying areas of water wastage/inefficiency and potential water-saving measures
- assessing and selecting water-saving measures for priority implementation
- preparing an action plan to implement water saving measures within specified timeframes
- providing for continuous monitoring and improvement through annual reporting on plan implementation and water savings, as well as regular reviews of the plan.

Preparing and implementing a WEMP is an essential part of a long-term strategy for more sustainable water use by non-residential customers outside the SEQ region or outside a designated region.

A WEMP can have several benefits, including:

- identifying water as a business input that should be considered as part of business and budgetary planning
- assisting non-residential customers to reduce demand and better manage water consumption
- recognising the linkages between water, energy and waste, and the broader impact and savings that can occur with reducing water usage
- ensuring a greater level of accountability and transparency in water use
- providing a process for regular review and uptake of water efficiency opportunities.

Developing and implementing a WEMP can deliver many benefits to non-residential customers, including:

- reducing water-related costs (such as water, wastewater and trade waste bills)
- reducing energy and chemical costs
- changing employee behaviours leading to further water savings and improved morale and productivity
- enhancing their profile and reputation among the community and shareholders as a result of improved environmental performance and efficient use of water as a scarce resource.

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<sup>1</sup> Designated region means a region designated under the *Water Act 2000*, section 360D.

<sup>2</sup> For example, understanding a site's historical use can lead to a better understanding of water use trends and can also show the achieved savings in the past that, although they may not contribute to savings in the current WEMP, will demonstrate a business's commitment to the efficient use of water.

Benefits of a WEMP to water service providers include:

- helping to ensure that water is available for future residential and non-residential needs
- avoiding or deferring investment to augment water and wastewater infrastructure
- contributing to demand management targets or requirements that may be set by the state government
- providing a useful tool in seeking equity of water efficiency measures across large water users.

## 1.2 Aim of this guideline

This guideline has been developed to provide non-residential customers outside the SEQ region, or outside a designated region, with information about preparing a WEMP. More specifically, it contains information relating to matters that must be addressed and included in a WEMP and processes to be followed by non-residential customers in preparing a WEMP.

Section 53 of the Act requires that a WEMP must comply with any guidelines made by the chief executive for preparing a plan.

This guideline provides information on the minimum requirements for non-residential customers to consider when preparing a WEMP in compliance with the Act. Non-residential customers may choose, at their own discretion, to go beyond these minimum requirements.

In this guideline, some of the chief executive's requirements are mandatory as they are legislative requirements of the Act. Where the chief executive's requirement is mandatory, the guideline will use the word 'must'. In this case, the non-residential customer must supply the information required. It is the non-residential customer's responsibility to ensure that mandatory legislative requirements of the Act are met.

In other cases, the chief executive's requirements are not mandatory but they are considered best practice. If the requirement is not mandatory, the word 'should' is used. Non-residential customers are able to follow the guideline's suggestion if they choose, or alternatively, can choose their own methods for satisfying requirements.

If a non-residential customer chooses to use their own method for satisfying the requirement, the water service provider will assess that alternative approach against the purpose of the relevant provisions in the Act relating to preparing a WEMP.

The explanatory material in this guideline is indicative of the Act's aims, but the water service provider may also choose to look at other information that supports the Act's aims, such as best practice industry standards, information provided by technical experts, or other relevant information.

## 1.3 Application of this guideline

This guideline applies to:

- non-residential customers outside the SEQ region, or outside a designated region, who obtain water from a water service provider and who are directed to prepare a WEMP by their water service provider
- water service providers outside the SEQ region, or outside a designated region, who assess and approve WEMPs submitted to them by their non-residential customers.

Under section 51 of the Act, the WEMP provisions only apply to non-residential customers:

- outside the SEQ region or outside a designated region
- who do not hold a water entitlement as defined under the *Water Act 2000*.

However, the WEMP provisions of the Act also apply in the following circumstances:

- If a non-residential customer outside the SEQ region, or outside a designated region, who holds a water entitlement under the *Water Act 2000* also obtains water from a water service provider under another arrangement, the WEMP provisions of the Act apply to that non-residential customer for that water obtained under that arrangement.
- If a non-residential customer obtains water from a water service provider who is in the SEQ region, or a designated region, as well as from another water service provider who is outside the SEQ region, or outside a designated region, then that non-residential customer is deemed to fall under the jurisdiction of the Queensland Water Commission and the WEMP provisions of the *Water Act 2000* apply.
- If a non-residential customer obtains water from more than one water service provider in the region, the water service provider who provides the non-residential customer with the most water is the water service provider for that non-residential customer.

For the purpose of this guideline, non-residential customers fall into one of the following classes:

1. non-residential customers with premises that are commercial buildings (as defined in the glossary of this guideline)
2. non-residential customers with any other type of activity associated with their premises. Examples of other non-residential users include public swimming pools, aged care facilities, nurseries, manufacturing or processing industries, turf farms, market gardens and hospitals.

### 1.3.1 When a WEMP may be required

A WEMP may be required in the following circumstances:

- The chief executive may, by written direction, require a non-residential customer, or type of customer, to prepare a WEMP and to give it to the water service provider within the reasonable period stated by the chief executive (section 52(1) of the Act)<sup>3</sup>.
- A water service provider, may, without direction, give a non-residential customer, or type of customer, a written notice, approved by the chief executive, to prepare a WEMP and to give it to the water service provider within the reasonable period stated by the water service provider under section 52(3) of the Act. In this case, a water service provider must first get approval from the chief executive to issue a written notice requesting the non-residential customer, or type of customer, to prepare a WEMP<sup>3</sup>.

Section 53 of the Act requires that a WEMP must comply with any guidelines made by the chief executive for preparing a plan.

### 1.3.2 Triggers for requesting a WEMP

The chief executive of the department may require water service providers to prepare WEMPs in cases where both of the following criteria exist:

- The water service provider requires augmentation of water supply systems within 10 years.
- The water service provider has non-residential customers that use more than 10 ML/year of town water supply, and there is a sum of greater than 50 ML/year of town water supply used by these types of non-residential customers<sup>4</sup>.

The 10-year lead time will enable water efficiency initiatives to be implemented and monitored and sufficient time to plan for and construct new infrastructure if necessary. See the Appendix of this guideline for an explanation of the rationale regarding the 10-year timeframe for augmentation of water supply sources to meet demand.

In cases where both of the above criteria exist for a water service provider, and the chief executive of the department has not required the water service provider to prepare a WEMP, the water service provider should seek approval from the chief executive to issue a written notice to a non-residential customer, or type of customer, requesting them to prepare a WEMP.

Additionally, if a water service provider believes that the above criteria are too limiting for their particular area, as necessary the water service provider may request WEMPs from other types of non-residential customers. In this case, the water service provider must first get approval from the chief executive to issue a written notice to a non-residential customer, or type of customer, requesting them to prepare a WEMP.

Section 53 of the Act requires that a WEMP must comply with any guidelines made by the chief executive for preparing a plan.

## 1.4 Key roles and responsibilities

### 1.4.1 Water service provider

In relation to this guideline, the key role for a water service provider is the assessment and approval of a WEMP. Other responsibilities include:

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<sup>3</sup> Section 24AA of the *Acts Interpretation Act 1954* provides that if an Act authorises the making of an instrument, the power includes power to repeal (cancel) the instrument. The power to cancel the instrument is to be exercised in the same way and under the same conditions as the power to make the instrument.

<sup>4</sup> For individual non-residential customers, this is based on the actual metered water consumption of 10 ML/year or greater based on the most recent four quarterly rating periods, or the last 12-month rating period (as applicable) or it is based on an estimated annual consumption for the premises based on an extrapolation of water consumption as set out in the available quarterly rating periods that is 10 ML/year or greater.

- requesting non-residential customers to prepare a WEMP<sup>5</sup>
- ensuring compliance with the required submission date
- reporting, on request to the chief executive, regarding the implementation of a WEMP. Further details on the water service provider's reporting requirements are provided in section 4 of this guideline.

### **1.4.2 Non-residential customers**

A non-residential customer, where requested by a water service provider to prepare a WEMP, has the following responsibilities:

- submitting a WEMP to the water service provider by the required date
- ensuring the WEMP meets the requirements of the relevant provisions of the Act and this guideline made by the chief executive
- reporting annually to the water service provider on the progress of the approved WEMP. Further details on non-residential customer's reporting requirements are provided in section 4 of this guideline.

## **1.5 Application fee for approval of a WEMP**

Pursuant to section 54 of the Act, a water service provider may recover from their non-residential customer as a debt an application fee for the approval of the non-residential customer's WEMP.

The application fee cannot be more than the cost to the water service provider of approving the WEMP.

## **1.6 Additional supporting information**

Additional supporting information has been prepared to assist water service providers and their non-residential customers to meet the requirements of the WEMP provisions in the Act and this guideline. This supporting information includes:

- a WEMP template for non-residential customers to use as the basis of their WEMP. This is an Excel spreadsheet tool that covers the necessary aspects of a WEMP
- a user guide to assist non-residential customers in using the WEMP template
- the Water Efficiency Management Plan Handbook for Water Service Providers. This aims to assist water service providers outside SEQ to administer WEMPs prepared under the Act by their non-residential customers
- additional information sheets, or links to additional information sheets, that provide reference material that may assist non-residential customers to prepare an accurate and effective WEMP for their premises and operations.

This supporting information can be accessed on the department's website <[www.derm.qld.gov.au](http://www.derm.qld.gov.au)>.

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<sup>5</sup> See the Water Efficiency Management Plan Handbook for Water Service Providers on the department's website at <[www.derm.qld.gov.au](http://www.derm.qld.gov.au)> for details of the requirements of the written notice from the water service provider requesting a non-residential customer to prepare a WEMP.

## 2. WEMP overview

### 2.1 General details

In accordance with section 53 of the Act, a WEMP must include:

- the name of the non-residential customer and the location where the plan applies
- an outline of the non-residential customer's current water use at the location and the source of the water
- the water-saving and efficiency measures that will be achieved by implementing the plan
- the timeframes for implementing the plan.

It is considered best practice for senior management to conduct a management review prior to developing their WEMP. This is a review of the organisational structure, and roles and responsibilities in relation to water management, including an assessment of staff and management attitudes and behaviour towards water use. It should identify ways in which water efficiency can be integrated into business and budgetary planning. The outcomes and actions arising from the review should be included in a WEMP.

### 2.2 Baseline water use and water source information

A WEMP must document where water used on the premises is sourced from and include an assessment of current water use in order to establish a baseline against which to assess water-saving and efficiency measures. This assessment must look at each of the elements outlined below.

#### 2.2.1 Sources of water

A WEMP must document the sources of water used at the premises, including water from the water service provider (that is, reticulated (mains) water). In addition, the following sources of water should also be identified:

- private bore, rainwater tank, dams or other supplies
- ground or surface water obtained through a water entitlement or otherwise
- recycled water from an internal or external source.

The water service provider and account/entitlement/contract details for each water source should also be included.

#### 2.2.2 Current water use

A WEMP must state current water use. This must be based on data from a representative period of no less than 12 months before the start of the WEMP or a time period approved by the water service provider. The total water use for the premises must be documented. Water use volumes from non-reticulated sources may be estimated where unmetred.

The following additional water use information should be documented:

- daily average water use (for water accessed from the reticulated system only)
- any seasonal or operational water use variations due to trends or abnormalities.

#### 2.2.3 Water use inventory

A WEMP must state the uses of the water and associated volumes used on the premises. This water use inventory should include:

- any water-using process or pieces of equipment used on site which contributes to the total water use of the facility
- a list of end use categories (such as taps, urinals, toilets, showers, cooling towers, cleaning, equipment use, irrigation). For each end use category listed, provide a further breakdown of individual end uses within that category, for example, taps may include kitchen taps, women's toilet taps and men's toilet taps. The breakdown should provide a description of the end use, the condition of any equipment (if relevant) and current operation and utilisation levels
- the efficiency rating of existing fixtures/equipment by determining flow rates and associated Water Efficiency and Labelling Standards (WELS) rating—it is sufficient to take sample readings at a few representative fixtures throughout the facility
- the number of occupants and the commercial activity unit (CAU). The CAU may be the number of occupants for normal operating hours and conditions, for example, staff, students, passengers or visitors
- identification and recording of all leaks, including their location and associated end use.

A water balance should be documented based on reticulated water supply, alternative sources of water (where possible) and end-use categories for the past 12 months. A diagram, table or graph (a pie chart is recommended) can be used to show the breakdown of water use on the site.

## 2.2.4 Baseline key performance indicator

A WEMP must evaluate water use by identifying a baseline key performance indicator<sup>6</sup> (KPI) for the premises (include separate KPIs where there are unrelated business activities conducted on the premises).

Baseline KPI(s) should be calculated using the following formula:

$$\text{Baseline KPI} = \frac{\text{baseline annual water use}^6 \text{ (ML/year)}}{\text{commercial activity units}^6 \text{ in baseline period}}$$

A WEMP should identify and document any applicable industry benchmarks where available, including KPIs.

## 2.2.5 Meters and data logging

Meters and data logging should be used to identify water use, and should include:

- a summary table of meters recording location, identification number, ML/year usage and percentage of total usage
- use of additional sub-meters monitoring specific end uses or pieces of equipment. Additional sub-meters can help non-residential customers to better understand and manage water use and achieve best practice by measuring water consumption of a facility, end use category or piece of equipment (for example, to monitor the amount of water used by cooling towers as part of the total site usage)
- weekly, or preferably continuous, reading of meters. Meters should be data logged to document (at a minimum) an hourly average for at least four weeks as part of the process to evaluate water use.

## 2.3 Water use efficiencies and reticulated water savings

A WEMP must identify potential water efficiency measures and the resulting reticulated water savings that will be achieved.

### 2.3.1 Non-residential customers with premises occupied by commercial buildings

For premises occupied by commercial buildings (as defined within the glossary of this guideline), measures to achieve water use efficiency and their resulting reticulated water savings should seek to ensure:

- unplanned accidental usage (for example, leaks and faulty controllers) is fixed in a timely manner
- all water fixtures (taps, showers, toilets, urinals, hoses, etc.) have a minimum WELS efficiency rating as defined in Table 1
- cooling towers are operated efficiently
- outdoor water use is undertaken with water-efficient devices and systems, and use of alternative water supply sources is explored (for example, recycled water).

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<sup>6</sup> See the glossary of this guideline for a definition of key performance indicator, baseline annual water use and commercial activity units

**Table 1: Fixtures performance requirements**

Fixtures <sup>7</sup>	Performance criteria (minimum WELS rating)	Flow rate/usage
Taps	3-star or higher	Less than 9 L/min
Showers	3-star or higher	Less than 9 L/min
Toilets	3-star or higher	New toilets should be a minimum of 6/3 L dual flush.
Urinals	4-star or higher	Flush volume not more than 1.5 L per flush. Maximum daily use of 10 L per stall or per 600 mm of continuous wall. Waterless technology should be implemented where possible.
Kitchen trigger sprays (commercial kitchens)	3-star or higher Mounted, flexible hoses with automatic cut-off trigger	Less than 9 L/min

### 2.3.2 Non-residential customers with premises used for other activities

For premises with an activity other than a commercial building associated with their premises, such as public swimming pools, aged care facilities, nurseries, manufacturing or processing industries, turf farms, market gardens and hospitals, measures to achieve water use efficiency and their resulting reticulated water savings should seek to achieve:

- a reduction of water use by 25 per cent
- best practice water use efficiency; or
- identification and implementation of all measures with a payback period of four years or less.

In addition, these premises should:

- include a program to identify and fix leaks
- identify target key performance indicators (KPIs)
- provide information for each water efficiency measure including
  - a description of the measure and the end use affected
  - whether it is a one-off or ongoing activity
  - expected water savings (ML/year)
  - the percentage reduction in water consumed by the end use
  - time required to implement the measure
  - key risks (technical, administrative and environmental).

### 2.3.3 All non-residential customers

#### 2.3.3.1 Review of management practices

A WEMP should include a review of management practices in relation to water efficiency measures and water-saving opportunities. The review should consider the management areas of accountability, management structure, staff awareness and training, reporting and budgeting.

<sup>7</sup> Note that other fixtures, such as commercial dishwashers and clothes washing machines (4-star or higher), could also be considered where appropriate—that is, if non-residential customers frequently use these fixtures on their premises

The management review should indicate:

- how efficiency objectives and water conservation are incorporated in maintenance procedures
- how water efficiency objectives are incorporated in operational procedures
- measures proposed to increase awareness and accountability.

The outcome of the review should be used to clearly define actions, assign responsibility to specific individuals and establish firm dates for completion of the WEMP. The site's action plan should identify each action, the person responsible and the designated timeframes.

### **2.3.3.2 Assessment of cost effectiveness**

A WEMP should provide an indication of the cost effectiveness of identified water-saving measures. An assessment of the cost effectiveness should include an assessment of the costs and benefits of each water efficiency measure to establish the relative priority for implementation. Costs and benefits can include an assessment of:

- water savings
- energy consumption
- wastewater output
- time taken to implement
- the payback period for each measure using the costs and benefits information gathered above. The payback period is the number of years needed to recoup the initial investment in a project.

The payback analysis can include costs associated with:

- implementation, including external capital costs relating to the design, procurement, installation and commissioning of the measure and any other direct costs of implementation
- annual savings in water, wastewater and trade waste charges, or any other operating costs.

## **2.4 Action plan**

A WEMP must identify potential water-saving measures and water efficiency measures that will be achieved by implementing it. A WEMP must include an action plan that identifies timeframes for implementing efficiency and water-saving measures.

### **2.4.1 Non-residential customers with premises occupied by commercial buildings**

The action plan must include the following:

- total current water use from metered sources and estimated use from other sources (where possible) and total projected water savings (ML/year and as a percentage of baseline use)—as determined in section 2.2 of this guideline
- identification of each water efficiency measure proposed to be implemented, including
  - the associated end use category
  - proposed water savings (ML/year)
  - date for commencement and completion
  - person responsible
  - total cost of works to implement
  - Status—that is, whether measures have been partially or fully implemented at the time of submission of the WEMP.

In addition, it is considered best practice for the action plan to identify target and current KPIs for the operation.

### **2.4.2 Non-residential customers with premises used for other activities**

The action plan must include the following:

- total current water use from metered sources and estimated use from other sources (where possible) and total projected water savings (ML/year and as percentage of baseline use)—as determined in section 2.2 of this guideline
- identification of each water efficiency measure proposed to be implemented, including
  - the associated end use category

- proposed water savings (ML/year)
- date for commencement and completion
- person responsible
- total cost of works to implement
- net annual savings (\$/year)
- payback period (years)
- status—that is, whether measures have been partially or fully implemented.

In addition, it is considered best practice for the action plan to identify a target and current KPIs for the operation.

Where the outcome sought is best practice, the action plan should include the types of measures the non-residential customer has implemented, or intends to implement, to achieve best practice and why such measures are considered to be best practice. This can include an assessment and benchmarking of activities and processes conducted on the premises, against industry accepted KPIs or industry standards.

## **2.5 WEMP sign-off by the non-residential customer's organisation**

Under the Act, a non-residential customer must comply with the WEMP, otherwise penalties apply. Therefore the WEMP should be adopted by the non-residential customer and be signed by the appropriate person—that is, a person with the appropriate authority to authorise the actions identified in the WEMP (for example, the chief executive officer, operations manager or business manager).

### 3. Process for submission and approval of a WEMP

A WEMP must be submitted to a water service provider for assessment and approval within the timeframe stated by the water service provider.

Under section 54 of the Act, the water service provider must either:

- approve the plan with or without conditions
- refuse to approve the plan; or
- request additional information.

If additional information is not required, the water service provider must approve, with or without conditions, or refuse the WEMP within 60 business days after receiving the WEMP.

Where additional information is required, the water service provider must approve, with or without conditions, or refuse the WEMP within 60 business days of when the information is received, or should have been given, whichever is earlier.

Table 2 outlines the possible WEMP assessment outcomes under the Act and the respective action and timeframe for action by the water service provider.

**Table 2: Possible WEMP assessment outcomes**

Outcome	Action by the water service provider	Timeframe for action
Approve the WEMP with or without conditions	The water service provider must give the non-residential customer an information notice of the approval, including any conditions of approval.  Note: The information notice must include specific requirements that are outlined in the WEMP Handbook for Water Service Providers on the department’s website.	The water service provider has 10 business days after making the decision to approve the WEMP to give the non-residential customer an information notice.
Refuse to approve the WEMP	The water service provider must give the non-residential customer an information notice with: <ul style="list-style-type: none"> <li>• reasons for the decision</li> <li>• information for amending the WEMP to address the reasons for the decision.</li> </ul>	The water service provider has 10 business days after making the decision to refuse the WEMP to give the non-residential customer an information notice.  The non-residential customer has 20 business days after receiving the information notice to give the water service provider the revised WEMP.  The water service provider may extend the period to more than 20 business days if required.
Request additional information	The water service provider may request additional information from a non-residential customer where required for the purposes of assessing the WEMP.	The water service provider must state a reasonable period by which the non-residential customer must give a revised WEMP.  The water service provider must approve, with or without conditions, or refuse to approve the WEMP within 60 business days of when the additional information required is received or should have been given, whichever is earlier.

To approve a WEMP, the water service provider must be satisfied that the WEMP:

- complies with this guideline
- satisfies the requirements of the Act
- is adequate in all material particulars.

Note: The WEMP becomes operational once it is approved.

## 4. Reporting and review

### 4.1 Annual reporting requirements

#### 4.1.1 Water service providers

Under section 56 of the Act, the chief executive may at any time ask a water service provider to provide:

- a copy of an approved WEMP
- information about a plan that has not yet been approved; or
- a report summarising progress by the water service provider's non-residential customers in achieving water savings and efficiencies.

The water service provider must comply with the chief executive's request within 20 business days. Failure to comply with this provision is an offence punishable by a maximum penalty of 100 penalty units (currently equivalent to \$10 000).

#### 4.1.2 Non-residential customers

Under section 56 of the Act, non-residential customers who have an approved WEMP must provide the water service provider with a written report each year advising:

- the extent to which the plan has been implemented (that is, the water conservation actions implemented to date)
- the water savings and efficiencies achieved by implementing the plan
- any change of circumstances in relation to the matters mentioned in section 57(1)(a) of the Act. For example, any additional water conservation practices, apart from those outlined in the WEMP, that the non-residential customer has had to implement in response to a severe water shortage etc.

In order to address these requirements, the report should include:

- details about the activity conducted on the premises
- a summary of which measures in the action plan have been initiated and/or completed
- the water savings and efficiencies achieved by implementing the WEMP, including
  - projected and actual water savings for each efficiency measure and end use identified in the WEMP action plan
  - target and actual KPIs
- any change of circumstance that could significantly affect implementation of the WEMP or water consumption at the premises, including
  - any change in processes
  - any change in operational output (scaled up or scaled down)
  - maintenance/emergency issues
  - additional water sourced (for example, acquisition of additional water allocation or water licence, seasonal assignment)
  - any other issue that might impact on achievement of WEMP actions.

The report must be given to the water service provider within 10 business days after the anniversary day (one year after the approval date) for the WEMP.

Failure to comply with this provision is an offence punishable by a maximum penalty of 100 penalty units (currently equivalent to \$10 000).

### 4.2 Reviewing a WEMP

Pursuant to section 61 of the Act, a water service provider must ensure a non-residential customer, to whom an approved WEMP applies, reviews the WEMP when the water service provider considers it appropriate.

The non-residential customer must give the water service provider a copy of the review report within the reasonable period stated by the water service provider.

It is a requirement of the Act that a review must occur at least every five years.

## **4.3 Amending or replacing a WEMP**

### **4.3.1 Amending or replacing a WEMP by chief executive direction**

Section 57 of the Act applies if the chief executive is satisfied that there is or is likely to be:

- a severe water supply shortage; or
- an increase in the severity of a water supply shortage.

Under this section, the chief executive may, by written direction, require a water service provider to give a non-residential customer, or type of customer, a written notice requiring the non-residential customer, or type of customer, to:

- amend an approved WEMP and give it to the water service provider within the reasonable period stated by the chief executive; or
- prepare a new WEMP and give it to the water service provider within the reasonable period stated by the chief executive.

Failure by the water service provider to comply with the direction given by the chief executive is an offence punishable by a maximum penalty of 500 penalty units (currently equivalent to \$50 000).

In addition, failure by the non-residential customer to comply with the written notice in this section is an offence punishable by a maximum penalty of 500 penalty units (currently equivalent to \$50 000).

### **4.3.2 Amending or replacing a WEMP by water service provider direction**

Section 58 of the Act applies if a water service provider is satisfied that:

- for a non-residential customer, or a type of customer, production output or water consumption has increased significantly
- the cost effectiveness of implementing an approved WEMP is likely to have changed significantly; or
- there is or is likely to be a severe water supply shortage.

Under this section the water service provider must give the non-residential customer a written notice requiring the non-residential customer to:

- amend the WEMP and give it to the water service provider within the reasonable period stated by the water service provider; or
- prepare a new WEMP and give it to the water service provider within the reasonable period stated by the water service provider.

Failure to comply by the non-residential customer with the written notice in this section is an offence punishable by a maximum penalty of 500 penalty units (currently equivalent to \$50 000).

### **4.3.3 Amending or replacing a WEMP by request**

Under section 59 of the Act, a non-residential customer may request an amendment of an approved WEMP or preparation of a new WEMP.

If the water service provider approves the request, the non-residential customer must:

- amend the WEMP and give it to the water service provider within the reasonable period stated by the water service provider; or
- prepare a new WEMP and give it to the water service provider within the reasonable period stated by the water service provider.

## **4.4 Notice to comply with a WEMP**

Section 60 of the Act applies if a water service provider is satisfied or reasonably believes a non-residential customer to whom an approved WEMP applies has not complied with the plan.

Under this section, the water service provider may give the non-residential customer a notice requiring the non-residential customer to comply with the WEMP within the reasonable period stated in the notice.

## **5. Appeal rights**

Any person who is given an information notice of a decision to approve or refuse a WEMP by the water service provider may appeal that decision under the provisions in Chapter 7 of the Act.

In the first instance, this appeal must be by way of an application for an internal review. An application for an internal review must be made within the timeframe specified in the Act.

## 6. Glossary

The terms below are used for the purpose of this guideline.

Term	Definition
Augmentation	As it relates to the trigger for a WEMP in this guideline, a new source of supply of water or an increased supply of water. This could include the purchase or acquisition of a new water entitlement.
Baseline annual water use	Volume of reticulated water consumed during the period of no less than 12 months before the audit (or a time period approved by the water service provider) forming the basis for the water balance.
Benchmarking	The process of comparing performance with other organisations, identifying comparatively high performance organisations and learning what it is they do that allows them to achieve that high level of performance.  The process includes identifying and observing the best practices from one or more benchmark organisations.
Best practice	Methods and techniques that have consistently shown results superior to those achieved with other means and provide benchmarks for which to strive. There is, however, no practice that is best for everyone, or in every situation, and no best practice remains best for long as people continually improve on ways of doing things. (Source: BusinessDictionary.com).
Commercial activity unit	The units used by a non-residential customer to measure or benchmark their commercial activity. The units should be comparable to water use and will be dependent on the objectives of the operations undertaken at the premise(s). This may include (but is not limited to) kilograms, tonnes, litres, staff, students, passengers, visitors, square metres and gross floor area.
Commercial buildings	A commercial building includes a building(s) where the significant end uses of water on the premises are for cooling towers and fittings and fixtures (including taps, showers, toilets and urinals), for example, office buildings. In this definition, the term significant end use means when the end use of water is equal to or more than 85 per cent of total water used on the premises (excluding unplanned uses).
Cooling tower	An open reticulating cooling water system used to extract heat from processes or equipment on premises, including air conditioning chillers and industrial processes.
Key performance indicator (KPI)	A quantifiable measurement that accurately reflects the water use for the commercial activity conducted at the premises and permits benchmarking with historical water use or other like businesses. The relevance of a KPI is strongly dependent on selecting an appropriate commercial activity unit.
ML (Megalitre)	A million (1 000 000) litres. This equates to 1000 kilolitres (kL).
Payback period	The number of years needed to recoup the initial investment for each water efficiency measure.

Reticulated (town) supply system	<p>A system of water distribution infrastructure operated by a water service provider delivering potable (drinking quality) water to premises in the local government area of the service provider, directly to the premises through the distribution system or indirectly to the premises in a water tanker or other container containing water that has been sourced from the reticulated supply system.</p> <p>The system also includes a rainwater tank which contains any water sourced from the reticulated water supply system including rainwater tanks employing a trickle top-up system. However, it does not include a rainwater tank that is connected to a house via an automatic switching valve for the purpose of maintaining supply to internal toilet cisterns, washing machine cold water taps or other fixtures specified in a local planning instrument where stored rainwater is sourced directly from an outlet from a tank or upstream from the automatic switching valve.</p>
Water use inventory	A catalogue of all water using fittings, fixtures or equipment on site.

The terms below are defined in the *Water Supply (Safety and Reliability) Act 2008* (the Act).

Term	Definition
Non-residential customer	A customer of a water service provider who uses water on non-residential premises.
Non-residential premises	Premises that are not used for ordinary residential purposes—for example, tourist accommodation, nursing homes, hostels, hospitals, caravan parks, convents, nurseries, market gardens, turf farms, farms, conference centres and the common property of a community title scheme under the <i>Body Corporate and Community Management Act 1997</i> or the <i>Building Units and Group Titles Act 1980</i> .
Recycled water	Any of the following that are intended to be reused: <ul style="list-style-type: none"> <li>a) sewage or effluent sourced from a service provider’s sewerage</li> <li>b) wastewater, other than water mentioned in paragraph (a).</li> </ul>
Wastewater	The spent or used water generated on premises from industrial, commercial or manufacturing activities, or animal husbandry activities, other than spent or used water generated from: <ul style="list-style-type: none"> <li>a) an agricultural activity; or</li> <li>b) a mining activity or Chapter 5A activity as defined in Schedule 4 of the <i>Environmental Protection Act 1994</i>.</li> </ul>
Water entitlement	Water entitlement means any of the following: <ul style="list-style-type: none"> <li>a) a water allocation</li> <li>b) an interim water allocation as defined in Schedule 4 of the <i>Water Act 2000</i>; or</li> <li>c) a water licence.</li> </ul>
Water service provider	A person registered under Chapter 2, Part 3 of the Act as a service provider for a water service.

## 7. Appendix

### **Explanation of the 10-year rationale for augmentation of water supply sources to meet demand**

More stringent water restriction measures should be adopted by water service providers in areas where it is expected augmentation of water supply sources will be required within the next 10 years (or less) to meet demand. A greater demand management effort is required from water service providers that fall into this category, as it may avoid or defer the need to secure additional water supplies.

The need for new water sources can arise from:

- increased demand, for example, increased population growth; and/or
- a reduction in available supply which may be due to reduced yield during a drought or significant fluctuations due to climate change, which on average, reduce the reliable yield from climate-dependent water sources.

In such cases, additional water sources can be obtained through a number of mechanisms, traditionally requiring the construction of some infrastructure. For the purposes of this guideline, augmentation of water supply includes:

- constructing a pipeline, weir or dam
- building a recycled water plant, desalination plant, or dual reticulation system (including increasing the size of existing plants and distribution networks)
- developing groundwater sources
- duplicating a bulk main distribution network
- purchasing unallocated water
- participating in a water trading scheme.

A 10-year lead time would allow sufficient time to:

- implement water demand management initiatives (one to two years)
- determine the long-term effectiveness of these measures (four to five years)
- augment water sources (three to five years), excluding dams.

To avoid the risk of running out of water, and to delay the cost of building new infrastructure, more stringent water restriction measures should be adopted by water service providers falling within this category.