

# Recycled Water Management Plan

## Exemption Guideline

December 2011

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Prepared by:  
Urban Water Policy and Management  
Department of Environment and Resource Management

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# 1. Introduction

The recycled water provisions of the *Water Supply (Safety and Reliability) Act 2008* (the Act) commenced on 1 July 2008 and are administered by the Department of Environment and Resource Management (the department). The chief executive of the department is the regulator under the Act.

The primary aim of the recycled water provisions is to protect public health and, for certain schemes known as critical recycled water schemes, where applicable, to ensure continuity of operation of the scheme to meet the essential water supply needs of the community or industry.

The Act requires that a recycled water provider must have either of the following before supplying recycled water unless they are covered by a transitional period:

- a recycled water management plan (RWMP) approved by the regulator (refer to the Recycled Water Management Plan and Validation Guideline); or
- an exemption granted by the regulator from having an approved RWMP.

Recycled water providers supplying coal seam gas water (CSG recycled water) may also apply for an exclusion decision.

Transitional periods for recycled water providers are summarised in ‘Table 1 Transitional periods for obtaining an exemption’ of Recycled Water Management Plan Exemption Guideline (this guideline) or specified in sections 631–634 of the Act.

The Act is available online at <[www.legislation.qld.gov.au](http://www.legislation.qld.gov.au)>.

## 1.1. Scope of the recycled water provisions of the Act

### 1.1.1. Recycled water

The Act covers specific sources of recycled water.

These are:

- sewage or effluent sourced from a service provider’s sewerage  
or
- wastewater (other than sewage or effluent sourced from a service provider’s sewerage)  
intended to be reused, and
- coal seam gas water that augments a supply of drinking water.

The term ‘reused’ includes being treated to improve the water’s quality, but does not include merely being discharged into, or disposed of in, the environment. For example, recycled water being placed in a dam to augment drinking water supplies is covered.

The sources of recycled water covered by the Act are:

Any of the following that are intended to be reused

#### **Sewage or effluent sourced from a service provider’s sewerage**

Supply of sewage or effluent sourced from a service provider’s infrastructure is covered by the Act, regardless of whether it is used by the entity producing it or supplied to another entity.

#### **Wastewater, other than sewage or effluent sourced from a service provider’s sewerage**

Wastewater means 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 an agricultural activity or a mining activity<sup>1</sup> or Chapter 5A activity as defined under the *Environmental Protection Act 1994*, schedule 4. However, wastewater is not covered by the Act if:

- it is not supplied to another entity, that is, if the wastewater is used by the entity generating the recycled water, it does not fall under the jurisdiction of the Act. The Department of Justice and Attorney-General has jurisdiction under the *Workplace Health and Safety Act 1995* in those circumstances

<sup>1</sup> Defined in the *Environmental Protection Act 1994* section 147.

- it is supplied to an entity that under a guideline made by the regulator and prescribed under a regulation as a related entity to the entity that produces the recycled water.

Wastewater is only covered by the Act when it is supplied to another entity for reuse, where the other entity is not a related entity.

**Coal seam gas (CSG) water**, that means underground water brought to the surface of the earth in connection with exploring for or producing CSG, and includes CSG water:

- whether it is treated or untreated; or
- that is mixed with other water.

**Note:** Under section 301(2)(b) of the Act the regulator must declare a recycled water scheme to be critical if recycled water that is CSG water is supplied or proposed to be supplied under the scheme. Under section 250(2) of the Act, schemes that are declared critical are not eligible to apply for an exemption and as such schemes that supply CSG water are not covered by this guideline. Schemes that propose to supply CSG water into a water source, may apply to the regulator for an exclusion decision.

An exclusion decision can only be made by the regulator if the supply of the recycled water will not have a material impact on the drinking water supply of a drinking water service provider. If an exclusion decision is made, there will be no need for an RWMP for the scheme. However the exclusion decision may include conditions which need to be complied with. For further information on exclusion decisions refer to the Coal Seam Gas Recycled Water Management Plan and Validation Guideline, including Exclusion Decision Application Guideline.

For the purposes of the Act, recycled water does not include the following types of water; greywater, stormwater or desalinated water.

### 1.1.2. Recycled water providers

A recycled water provider means an entity that:

- owns infrastructure for:
  - the production and supply of recycled water other than CSG water; or
  - the production and supply, or the supply only, of recycled water that is CSG water; or
- another entity, prescribed under a regulation, that owns infrastructure for the supply of recycled water other than CSG water. For example, the owner of a pipeline supplying recycled water from one entity to another may be prescribed under a regulation as a recycled water provider.

In some cases a recycled water provider may obtain their source water from another recycled water provider. For example, a treatment plant owner may treat and use effluent from a local government's sewage treatment plant, where the owners are different, both would be considered as recycled water providers and both require their own approved RWMP or granted exemption.

A service provider is defined in the Act as:

- a local government that owns infrastructure for supplying water or sewerage services
- a water authority that owns infrastructure for supplying water or sewerage services
- each person who is
  - the owner of one or more elements of infrastructure for supplying water or sewerage services for which a charge is intended to be made; or
  - nominated in a regulation as a related entity of a person who is the owner of one or more elements of infrastructure for supplying water or sewerage services for which a charge is intended to be made.

Owning infrastructure for the production and supply of recycled water or supplying recycled water that is coal seam gas water does not in itself qualify a person as a service provider unless the person also owns other infrastructure for the supply of a water or sewerage service. A service provider does not include a service supplied by infrastructure, if:

- the infrastructure is used solely for mining purposes; or
- the service is used only by the owner of the infrastructure or the owner's guests or employees including, for example, guests at a resort; or
- if the owner of the infrastructure is a body corporate for a community titles scheme under the *Body Corporate and Community Management Act 1997*—the occupants of lots in the scheme.

### 1.1.3. Recycled water schemes

A recycled water scheme involves the entities and infrastructure related to the production and supply of recycled water. Recycled water schemes<sup>2</sup> include:

- single-entity recycled water schemes involving the production and supply of recycled water by only one recycled water provider and including the infrastructure, owned by the provider, for the production and supply, or the supply, of the water
- multiple-entity recycled water schemes involving the production and supply of recycled water and is made up of:
  - each recycled water provider and other entity declared to be part of the scheme under a declaration for the scheme made under chapter 3, part 8
  - the infrastructure for the production and supply of the recycled water.

Multiple-entity recycled water schemes must have a nominated scheme manager. The scheme manager is the entity that all recycled water providers and other declared entities agree is the scheme manager.

Declared entities are entities other than the scheme manager or recycled water provider/s who own infrastructure for the supply, rather than production and supply, of recycled water. These entities are specifically identified as other declared entities when a scheme is declared to be a critical recycled water scheme by the regulator.<sup>3</sup>

The regulator may declare a scheme to be a critical recycled water scheme if the regulator reasonably believes the declaration is necessary to:

- maintain continuity of operation of the scheme to meet the essential water supply needs of the community or industry; or
- to ensure the appropriate management of risks to public health posed by the supply of recycled water under the scheme.

While single-entity recycled water schemes may be declared critical, multiple-entity recycled water schemes will always be declared critical.

The scheme manager for multiple-entity schemes, if known at the time the scheme is declared critical, can be stated in the declaration. Alternatively, if the scheme manager's identity is not known when the scheme is declared critical, the declared entities must give the regulator a notice about who the scheme manager is as soon as practicable after the scheme is declared.

Refer to sections 300–307 of the Act for additional information on the declaration of critical recycled water schemes.

## 1.2. Aim of this guideline

This guideline has been prepared in accordance with section 571(1)(j) to provide guidance to recycled water providers applying for an exemption from having an approved RWMP. The Act requires an application for an exemption be accompanied by the information or documents required in accordance with this guideline under section 250 of the Act.

This guideline provides information about:

- which recycled water providers may not apply for an exemption
- which recycled water providers may apply for an exemption
- how to make an application for an exemption
- the process used by the regulator to determine if an exemption will be granted
- the obligations of a recycled water provider who has been granted an exemption.

In this guideline, some of the regulator's requirements are mandatory as they are legislative requirements of the Act. Where the regulator's requirements are mandatory, this guideline will use the word 'must'. In these cases, the recycled water provider must supply the information required and in the manner prescribed. It is the

<sup>2</sup> For exact definitions of recycled water scheme, single-entity recycled water scheme and multiple-entity recycled water scheme refer to the glossary of this guideline.

<sup>3</sup> For example, in a scheme supplying recycled water where there is an entity who does not own infrastructure for the production of recycled water but does own infrastructure for supply (for example, a pipeline), that entity may be declared to be part of a recycled water scheme.

responsibility of the recycled water provider to ensure that mandatory legislative requirements of the Act are met.

In other cases, the regulator's requirements are not mandatory. If the requirement is not mandatory the word 'should' is used in this guideline. Recycled water providers are able to follow the guideline suggestion if they choose, or alternatively choose their own methods for achieving requirements.

If a recycled water provider chooses to use their own method for satisfying the regulator's requirement, the regulator will assess that alternative approach against the regulator's policy objectives and the overarching aims of the Act. The explanatory material in this guideline is indicative of the regulator's policy objectives and the aims of the Act, but the regulator may also choose to look at other information which supports its policy objectives and the Act's aims such as best practice industry standards, information provided by technical experts or other health-based information.

## 1.3. Relationship to other guidelines

### 1.3.1. Other regulatory guidelines

This guideline is part of a suite of regulatory guidelines prepared to assist recycled water providers in understanding the requirements of the Act. In addition to this guideline, other regulatory guidelines include the:

- Recycled Water Management Plan and Validation Guideline
- Water Quality Guideline for Recycled Water Schemes
- Recycled Water Management Plan Audit Reporting Guideline
- Annual Reporting Guideline for Recycled Water Schemes
- Public Reporting Guideline for Recycled Water Schemes.

A non-regulatory Incident Reporting Guideline for Recycled Water Schemes has also been prepared to accompany the regulatory guidelines to assist recycled water providers and scheme managers to meet reporting requirements of the Act.

There are other guidelines, outlined in section 1.3.2, which provide advice on water recycling. However, the regulator must have regard to this guideline when determining whether to grant an exemption.

### 1.3.2. Other useful information

Other sources of valuable information are available for potential recycled water providers, or scheme managers, considering or intending to establish, operate or manage a recycled water scheme.

The Environment Protection and Heritage Council, the Natural Resource Management Ministerial Council and the National Health and Medical Research Council have developed guidelines for the safe production and use of recycled water. The guidelines are available online at <[www.ephc.gov.au](http://www.ephc.gov.au)> and include:

#### Phase 1

- Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Natural Resource Ministerial Management Council (NRMMC), Environment Protection and Heritage Council (EPHC), Australian Health Ministers' Conference (AHMC) 2006).

#### Phase 2

- Australian Guidelines for Water Recycling: Augmentation of Drinking Water Supplies (NRMMC-EPHC-National Health and Medical Research Council (NHMRC) 2008).
- Australian Guidelines for Water Recycling: Stormwater Harvesting and Reuse (NRMMC-EPHC-NHMRC (2009).
- Australian Guidelines for Water Recycling: Managed Aquifer Recharge (NRMMC-EPHC-NHMRC 2009).

Phase 1 of the guidelines provides a generic 'framework for management of recycled water quality and use' that applies to all combinations of recycled water and end uses. It also provides specific guidance on the use of treated sewage and grey water for purposes other than drinking and environmental flows.

The first module of Phase 2 of the guidelines extends the guidance given in Phase 1 on the planned use of recycled water (treated sewage and stormwater) to augment drinking water supplies. The second module of Phase 2 of the guidelines extends the guidance given in Phase 1 to cover the harvesting and reuse of

stormwater. The third module of Phase 2 of the guidelines focuses primarily on the protection of aquifers and the quality of the recovered water in managed aquifer recharge projects.

The Manual for Recycled Water Agreements in Queensland published by the Queensland Government provides information and guidance on writing a contract for the supply and use of recycled water. The manual is available online at the DERM website at <[www.derm.qld.gov.au](http://www.derm.qld.gov.au)>.

The Water Services Association of Australia (WSAA) National Wastewater Source Management Guidelines (July 2008) are a useful reference for any scheme which requires sewage source control. These are available at <[www.wsaa.asn.au](http://www.wsaa.asn.au)>.

### **1.3.3. Relationship to other legislation and regulations**

Recycled water schemes may operate under different legislation which must be complied with, for example the:

- *Environmental Protection Act 1994*
- *Plumbing and Drainage Act 2002*
- *Public Health Act 2005* and Public Health Regulation 2005
- *Workplace Health and Safety Act 1995*.

The requirements of the Act do not negate the requirements of other legislation. It is the responsibility of the recycled water provider to determine and ensure compliance with all relevant legislative requirements.

## 2. Exemption eligibility

Under the Act, all recycled water providers are required to have an approved RWMP unless they have an exemption from having an approved RWMP for the scheme or are covered by a transitional period. An RWMP is a documented, risk-based management plan for the production and supply of recycled water whose implementation is intended to ensure safe water recycling, through the identification and minimisation of public health risks.

The Act recognises that there will be recycled water providers supplying, or proposing to supply, recycled water where the potential risks to public health are minimal. Consequently, the Act allows these recycled water providers to apply for an exemption from having an approved RWMP.

Due to the high risks to public health, some recycled water providers are not eligible to apply for an exemption under section 250 of the Act and must have an RWMP approved by the regulator. These include schemes that:

- are declared by the regulator to be a critical recycled water scheme<sup>4</sup>
- supply recycled water to premises by way of a reticulation system used only for outdoor use or for use in flushing toilets or in washing machines (dual reticulation).

Applications for an exemption will be considered and assessed by the regulator on a case by case basis based on the potential for, and levels of, human exposure to the recycled water and associated risks.

### 2.1. Schemes that can apply for an exemption

The regulator will consider applications from recycled water providers supplying recycled water:

1. for irrigation of public open space
2. for irrigation of non–food crops and heavily processed food crops
3. to another recycled water provider for further treatment
4. to another use where the users are operating in compliance with an industry code or best practice management document as specified by the department
5. for other uses where the recycled water provider can demonstrate that the overall risk to public health is minimal.

The exemption will only be granted for item 4 above if the regulator is satisfied that:

- the requirements of the code or best practice management document will adequately address the management of risks associated with using recycled water
- the types of proposed uses have a low potential for, and levels of, human exposure to the recycled water and associated risks, which did not warrant a RWMP being prepared for approval by the regulator
- the user will be using the water in accordance with the code or best practice management document
- the recycled water provider can ensure the user will meet the requirements of the code or best practice management document.

Each application is considered on its own merits and there is no guarantee that any particular scheme will be granted an exemption. While the following schemes may apply for an exemption, the regulator is unlikely to approve an exemption for schemes supplying recycled water for minimally processed food crops.

After considering the circumstances of each case, the regulator may determine that an exemption is granted or refused. If an exemption is not granted, the recycled water provider must prepare and submit an RWMP for approval or cease supply.

The table in Appendix 1 provides an indicative list of uses and associated water quality, control measures and water quality monitoring frequency. The control measures listed in the table are the minimum controls expected by the regulator and are not exhaustive. Recycled water providers may wish to apply further or alternative controls to minimise risks to public health. The table **does not** provide for an automatic exemption from having an approved RWMP.

Having an exemption from having an approved RWMP does not mean a recycled water provider has no obligations under the Act. Instead it means they have fewer obligations than those operating under an approved RWMP. These obligations are listed in section 3 of this guideline.

<sup>4</sup> Refer to Section 1.1.3 of this guideline for information about critical recycled water schemes.

## 2.2. Schemes with multiple uses

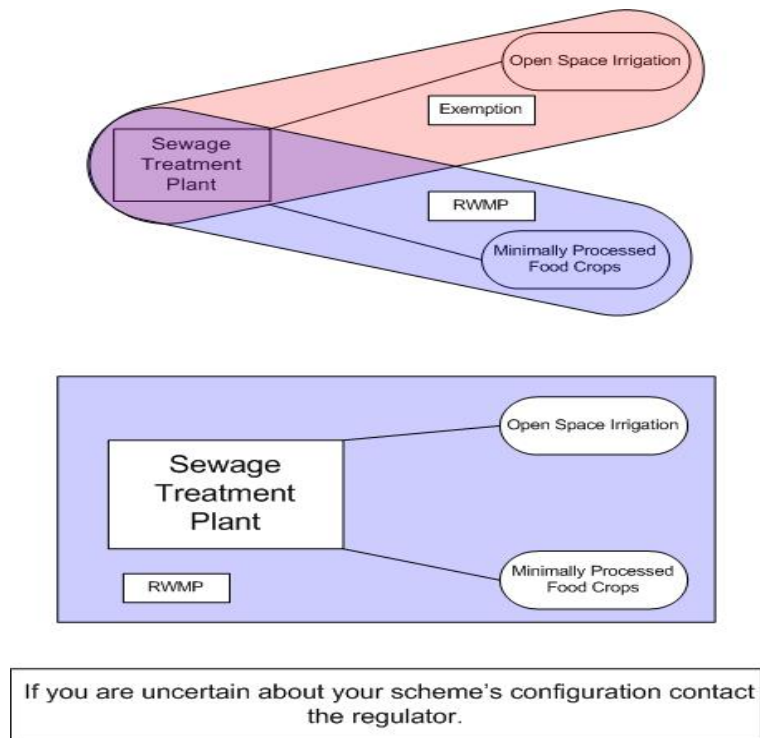
Recycled water schemes may supply recycled water for a number of different uses. Taking into account public health risk and on-site control measures implemented by the user, the water quality criteria for these uses may be different.

A recycled water provider may choose to have an exemption from having an approved RWMP for some use/s and have an approved RWMP for other use/s. Where the majority of the infrastructure for the scheme is the same, it is highly recommended the scheme operate under one approved RWMP. If operating with both an exemption and a RWMP recycled water providers will need to be aware of the different legislative requirements.

For example, a service provider’s sewage treatment plant may supply recycled water for spray irrigation of public open space and also subsurface irrigation of minimally processed food crops. A recycled water provider may apply for an exemption for the scheme to supply recycled water to public open space and an RWMP for irrigation of minimally processed food crop. However, should a water quality parameter exceed the approved water quality for both uses, then this will need to be reported to the regulator twice, once under each approval. This will include the required forms and reports.

Diagram 1 below represents the options that may be chosen by the recycled water provider when they supply for multiple uses.

**Diagram 1—Approval options for schemes with multiple uses**



## 3. General obligations for exemptions

### 3.1. Recycled water provider obligations

A recycled water provider who has been granted an exemption must comply with the conditions of the exemption and relevant sections of the Act. There are two types of conditions which can apply to an exemption. The first are statutory conditions which apply to all granted exemptions and are imposed as a requirement of section 256 of the Act. The second are conditions imposed by the regulator on the exemption in an information notice for the decision (known as regulator conditions).

If a recycled water provider fails to comply with any conditions (either the statutory conditions or the regulator conditions) for the exemption, the regulator may take a range of compliance actions, including cancelling or amending an exemption. Significant penalties apply for not complying with these requirements. In addition, a recycled water provider has a general obligation under the Public Health Act to produce and supply recycled water that is fit for use.

### 3.2. Statutory obligations for exempt schemes

To ensure compliance, a recycled water provider must:

- meet the water quality standards in the Public Health Regulation and/or comply with the specified water quality criteria as outlined in the Water Quality Guideline for Recycled Water Schemes and, if applicable, any regulator condition stated in an information notice for the decision
- immediately give the regulator notice if there has been a change in the circumstances under which an exemption was granted<sup>5</sup>. This will enable the regulator to amend, or if necessary cancel, the exemption. For example, if the recycled water provider proposes to supply water for a new use the provider must notify the regulator
- comply with any statutory condition<sup>6</sup> applying to the exemption. It is a condition of each exemption, that if the recycled water provider becomes aware that an entity to whom the recycled water provider supplies recycled water is using the water other than in a way or for a purpose provided for under the exemption, the provider must stop supply of the water to the entity.

For example, if a recycled water provider is granted an exemption for supplying recycled water for irrigation of sugar cane only and the provider becomes aware that a user is using recycled water for irrigation of lettuce (instead of, or in addition to, sugar cane), then the recycled water provider must cease supply of the recycled water to that user.

- give the regulator 30 days notice if the recycled water provider proposes to permanently stop supply of recycled water under the scheme, unless the provider has a reasonable excuse<sup>7</sup> (refer to section 230 of the Act). The notice must be given in the approved form and must state the actual date of proposed stoppage.

The notice will be deemed to have been withdrawn if the recycled water provider either:

- (a) fails to give the regulator information which has been requested<sup>8</sup> about the stoppage notice, without reasonable excuse
- (b) continues supplying recycled water after the nominated date.

If the notice is not withdrawn and supply has stopped, the recycled water provider must give the regulator another notice within five days after the day of the stoppage.

- prepare and submit an annual report to the regulator for each financial year for the life of the exemption. Refer to the Annual Reporting Guideline for Recycled Water Schemes for additional information on annual reports

<sup>5</sup> Recycled water providers should regularly communicate with users and ensure that users are aware that changes they make to the way in which the water is used or the purpose for which the water is used may affect the ability of the recycled water provider to supply recycled water. This is necessary to ensure that users do not inadvertently affect the ability of the recycled water provider to supply recycled water under the conditions of the exemption.

<sup>6</sup> Refer to section 256(1) of the Act.

<sup>7</sup> The aim of the legislation is to protect public health and for certain schemes to ensure continuity of operation of the scheme. Continuity of operation of the scheme is not a requirement for a scheme where an exemption has been granted. The Act does not require a recycled water provider with a granted exemption to continue the supply of recycled water for the scheme. That is, if the recycled water provider wishes to cease supply to that scheme, the Act does not prevent the cessation of supply.

<sup>8</sup> Or, where requested to verify the information, fails to provide the necessary verification under section 230 (6) (b),

- comply with reporting obligations under section 270 of the Act for noncompliance with water quality criteria by the scheme and under section 271 of the Act for prescribed incidents<sup>9</sup>. For more information on incident reporting, refer to the Incident Reporting Guideline for Recycled Water Schemes.

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<sup>9</sup> 'Prescribed incident' means an incident prescribed under a regulation.

## 4. Timeframes for exemption applications

### 4.1. Transitional periods

There are a number of deadlines (transitional periods) for having either an approved RWMP or obtaining an exemption. Once the transitional periods have expired, a recycled water provider will not be able to supply recycled water unless they have an approved RWMP or the regulator has granted an exemption.

For schemes that are eligible to apply for an exemption, the transitional periods are set out in sections 631–634 of the Act. Table 1, Transitional periods for obtaining an exemption, summarises the transitional provisions for exemptions except for the provisions under sections 631–634 that have now expired.

**Table 1—Transitional periods for obtaining an exemption**

Scheme type	Timeframes for requiring an approved RWMP or exemption granted	
Supply of recycled water to augment a supply of drinking water	<b>New schemes and Existing schemes</b> Recycled water schemes must have an approved RWMP before commencing the supply of recycled water—no exemptions may be sought.	
Supply of recycled water to premises by way of a reticulation system used only to provide recycled water for outdoor use or to use in flushing toilets or in washing machines	<b>New schemes</b> Recycled water schemes must have an approved RWMP before commencing the supply of recycled water—no exemptions may be sought.	
Supply of recycled water for irrigation of minimally processed food crops	<b>New schemes</b> Recycled water schemes must have an approved RWMP or granted exemption before commencing the supply of recycled water.	
All other recycled water schemes	<b>New schemes</b> These schemes must have an approved RWMP or granted exemption before a day that is 1 year after the day recycled water is first supplied under the scheme.	<b>Existing schemes</b> Recycled water schemes that have been operating prior to 1 July 2008 must have an approved RWMP or exemption granted in place on or before 1 July 2013.
The regulator has a discretionary power to issue a notice requiring an RWMP. This power may be exercised if the regulator identifies the need for an early submission of an RWMP to minimise public health risks or the scheme becomes a critical recycled water scheme.		

Note: Timeframes for the transitional periods are for obtaining the necessary approval/exemption not merely submitting an application. Further information on timeframes required for consideration of an application is contained in section 4.2.

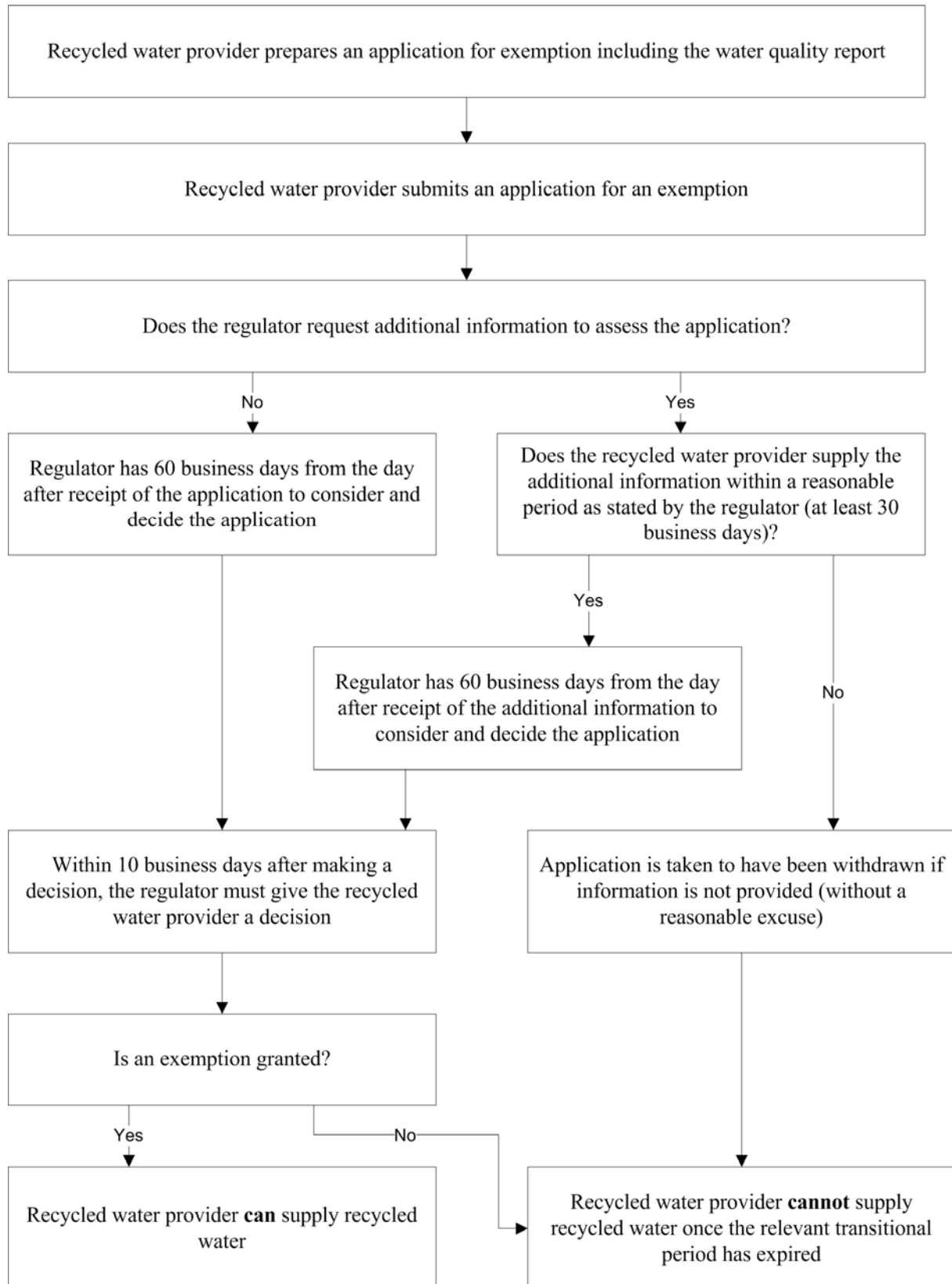
### 4.2. Timeframes for considering an application for an exemption

Submitting applications in a timely manner is particularly important for those recycled water providers seeking an exemption as the provider needs to allow:

- sufficient time for the regulator to consider the application, seek additional information if required and make a decision (refer to ‘Flowchart 1—Timeframes for consideration of an exemption application’)
- additional time to prepare and submit an RWMP if the application for an exemption is refused.

Note: For consideration and approval of an exemption, the regulator has 60 business days from the day after receiving the application for an exemption to consider and decide the application (section 253 of the Act). If the regulator seeks additional information, those 60 business days only commence after the request for additional information has been fulfilled. If the exemption application is refused and an RWMP application is required, the regulator has 80 business days to consider an RWMP application.

**Flowchart 1—Timeframes for consideration of an exemption application**



# 5. Exemption application process

## 5.1. Exemption application requirements

In accordance with section 250(3) of the Act, an application for an exemption must:

- (a) be in the approved form; and
- (b) be accompanied by the information or documents required to be given, as outlined in this guideline
- (c) be supported by enough information to enable the regulator to decide the application
- (d) be accompanied by a fee prescribed under a regulation<sup>10</sup>.

## 5.2. Information to be included in an exemption application

An application for an exemption should demonstrate that the risk to public health is low. In addition to the information provided on the application form, an application for an exemption should contain the information listed in ‘Table 2 Information required for an exemption application’.

**Note:** If the regulator considers that additional information is required under section 251 of the Act, the regulator may issue a notice to the recycled water provider to supply the additional information. The regulator may require a recycled water provider to verify the information provided by statutory declaration.

**Table 2—Information required for an exemption application**

Information type	Specific details that should be included
Recycled water provider details	<ul style="list-style-type: none"> <li>• The name of the recycled water provider, including an ABN and ACN if applicable.</li> <li>• Contact person including position and contact details (nominee).</li> <li>• Name for the scheme.</li> </ul>
Scheme location	<ul style="list-style-type: none"> <li>• A description of the physical location of the main components of the scheme, such as addresses or registered plan locations for the treatment plant/s, pipelines, pump stations, storages and locations where the recycled water is used. (This may be provided on a map/s)</li> </ul>
Infrastructure and distribution systems details	<ul style="list-style-type: none"> <li>• A brief description of the basic characteristics of each treatment component within the recycled water treatment system, including inputs to the system, treatment steps, pump stations, pipelines, bypasses, dosing points, storage facilities and point of supply.</li> <li>• A description of the primary source of the water being treated, for example, sewage derived or wastewater<sup>11</sup> including a breakdown of the sources (for example percentage of residential sewage and details of commercial and industrial trade wastes). Source water monitoring data may be provided. The regulator may require a source water characterisation dependant on the type of scheme, intended uses and the potential exposure routes.</li> <li>• A description the distribution network, including major infrastructure/distribution system components and the physical transfer point to user/s.</li> <li>• This information should also be represented in a schematic diagram/s. The schematic diagram/s should clearly depict the recycled water system from source to use/s.</li> <li>• A description of the operating conditions for the scheme such as:                             <ul style="list-style-type: none"> <li>• patterns of supply and demand</li> <li>• volume of recycled water produced</li> <li>• control measures</li> <li>• details of how the scheme will be monitored.</li> </ul> </li> </ul> <p>Diagram 3 provides an example indicative process flow diagram of a treatment process.</p>
Water quality report (verification)	<ul style="list-style-type: none"> <li>• A water quality report that meets the requirements outlined in section 5.3.</li> </ul>

<sup>10</sup> At the time of publication there is no prescribed fee for an application for an exemption. Please refer to the website <www.derm.qld.gov.au> for current information.

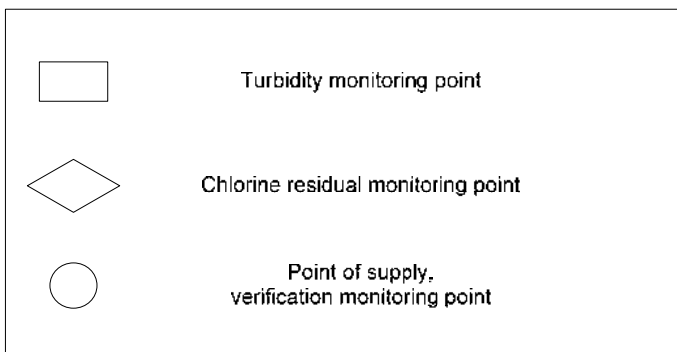
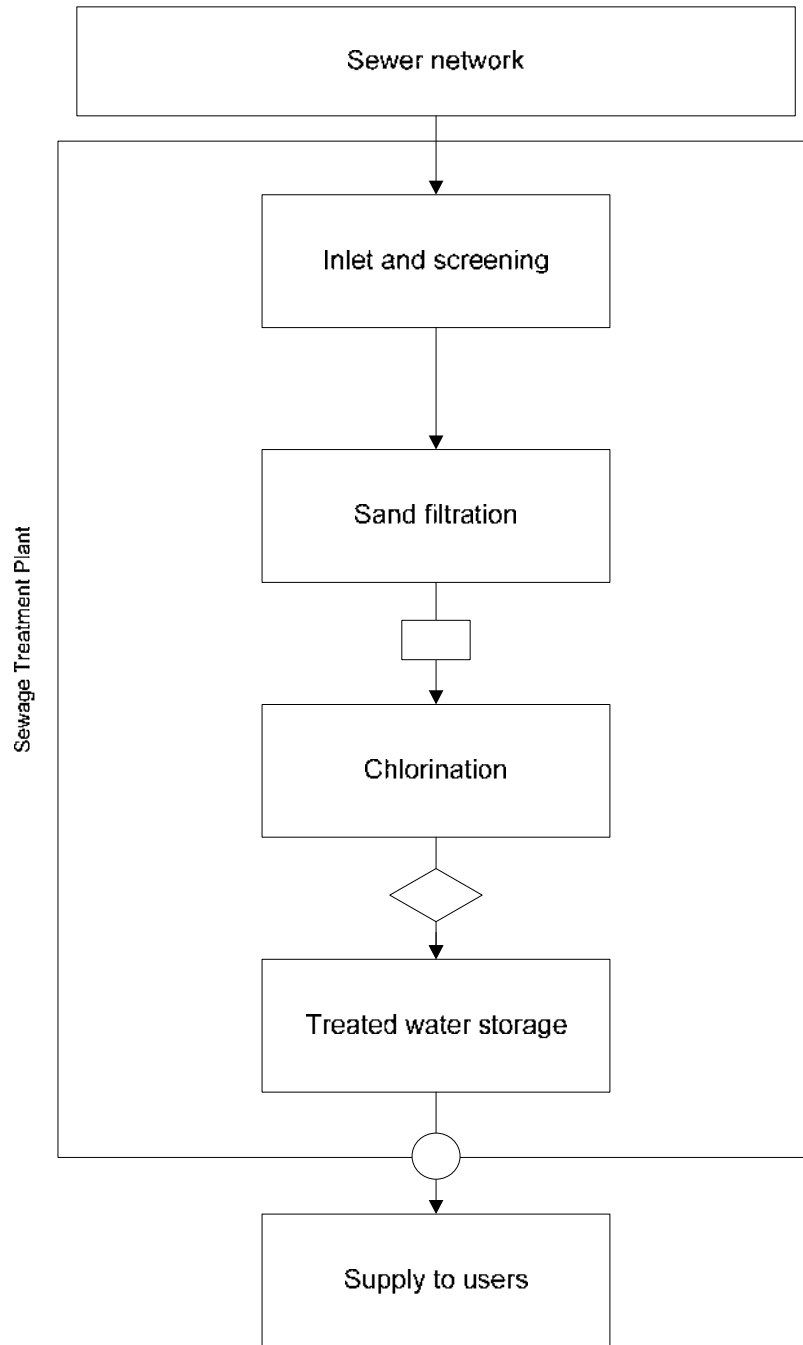
<sup>11</sup> Note: Wastewater is only within the scope of the Act if it is transferred to another entity that is not a related entity. Refer section 1.1.1 of this guideline for further details.

Information type	Specific details that should be included
Water supply arrangements	<ul style="list-style-type: none"> <li>• A description of all of the intended uses for the recycled water<sup>12</sup>. For example, irrigation of sugar cane, irrigation of sporting fields, dust suppression on construction sites, etc.</li> <li>• For schemes proposing to irrigate heavily processed food crops, list the crops and describe the food processing methods.</li> <li>• Details about the quality of water being provided or to be provided for each use.</li> <li>• Details of on site control measures in place for each identified use and/or user. For example, signage, limits on irrigation times, and irrigation methods. Refer to Appendix 1 for examples of on-site control measures for certain uses.</li> <li>• Provide documentation to support the suitability of the nominated water quality for the intended use ( for example, references to Appendix 1 or other relevant guidelines and evidence).</li> <li>• Information on water supply arrangements between the provider and users. For example, evidence of agreements between the recycled water provider and the users in relation to supply and use of the recycled water.</li> </ul>
Industry codes and best practice management guidelines	<ul style="list-style-type: none"> <li>• Demonstrate that the requirements of the code or best practice document will adequately address the management of risks associated with using the recycled water.</li> <li>• Demonstrate that recycled water will be used in accordance with the code or best practice document by the user (for example, supplying copies of relevant sections of user agreements, contracts, etc) including how the recycled water provider proposes to ensure the user will meet the requirements of the code or best practice management document.</li> <li>• A copy of the code or best practice document should be provided.<sup>13</sup></li> </ul>
Other information	<ul style="list-style-type: none"> <li>• Any additional information that demonstrates that the overall risk to public health is minimal.</li> </ul>

<sup>12</sup> The regulator does not regulate the user directly. Consequently the regulator requires information about the uses of recycled water (and on-site control measures) rather than the details of the users of the recycled water.

<sup>13</sup> The regulator does not 'pre-approve' industry codes.

**Diagram 2—Example of an indicative process flow diagram**



### 5.3. Requirement for water quality report to accompany an exemption application

The water quality report should demonstrate that the recycled water provider can consistently produce recycled water at the quality required for the intended use at the nominated point of supply. A water quality report should contain the following information:

- the parameters tested
- the frequency of testing
- a summary of test results (including for those schemes supplying Class A+ recycled water, proof that the log reduction requirements of the Water Quality Guideline for Recycled Water Schemes have been met)
- a summary of any water quality exceedences (if they occur), the circumstances that led to them occurring and any corrective/preventative actions taken or put in place
- the sampling location/s (point of supply)
- a statistical analysis of the data collected to determine the confidence level for meeting the water quality criteria on a continuous basis. Note: If statistical validity cannot be gained from the data set, further testing may be required.

The water quality report should contain at least thirteen weeks of twice weekly testing for all schemes; the regulator may alter this period on a case-by-case basis. For example, a recycled water provider may request to be excluded from this requirement if they have an existing scheme with several years of monthly test results.

Exceedences during testing for the water quality report should be reported to the regulator as soon as practicable. The regulator and the recycled water provider can then discuss what actions, if any, should be taken.

The water quality report should address all of the water quality criteria that are applicable to the scheme based on the source and intended uses including log reduction requirements for schemes supplying Class A+ recycled water. Water quality criteria are specified in the Public Health Regulation 2005 and the Water Quality Guidelines for Recycled Water Schemes. Appendix 1 of this guideline also provides guidance on appropriate water quality criteria for various uses of recycled water.

In certain circumstances the provider may require further guidance on determining appropriate monitoring parameters. In the following instances it is recommended that the recycled water provider contact the regulator for advice before undertaking water quality testing program in preparation of the water quality report.

Schemes that have:

- schemes that have a source other than sewage,
- no predetermined water quality criteria for an intended use
- parameters of concern in the catchment. (For example, known hazardous industries in the catchment) These may be identified by investigating or characterising the source of the recycled water.

If a recycled water provider has not obtained an exemption within the transitional period, a recycled water provider may **produce** the recycled water, provided that water is not **supplied**. To prepare the water quality report, a recycled water provider may produce the recycled water, perform the necessary tests and dispose of the produce water in accordance with any necessary approvals or licences.

#### 5.3.1. Determining the point of supply

Determining the point of supply is integral to describing the scheme. The point of supply is the point at which the monitoring of the final water quality is undertaken and where the water quality criteria for the scheme apply.

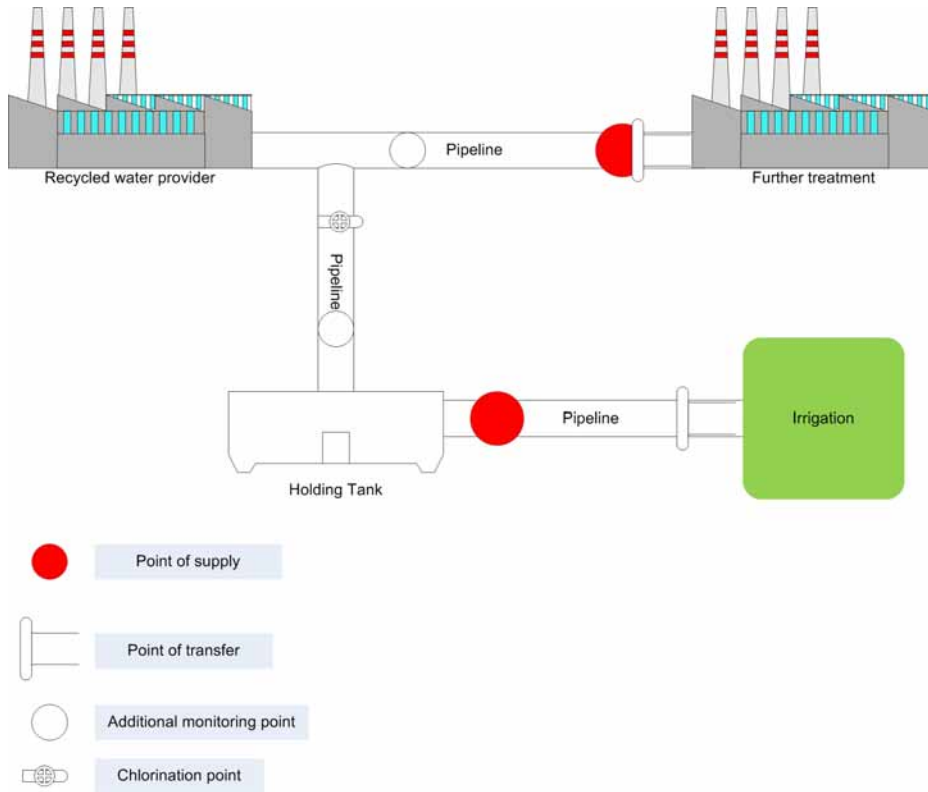
The water quality at the point of supply should be representative of the quality of water supplied to users. Ideally, the point of supply should be at, or as close as possible to, the physical location where the recycled water is transferred to the user (physical transfer point).

Where it is not possible to locate the point of supply at the physical transfer point, the recycled water provider should discuss with the regulator options for the location of the point of supply and additional monitoring point

requirements. Additional monitoring may be required to demonstrate that the water quality does not deteriorate between the point of supply and the physical transfer point.

Refer to Diagram 3 for an example of the points of supply for a scheme with two users.

**Diagram 3—Basic scheme layout showing appropriate point of supply**



## 6. Exemption application decisions

Section 253 of the Act specifies that when considering an application for an exemption, the regulator must have regard to:

- the application
- any additional information received from the provider as a result of a request from the regulator
- this guideline
- any advice obtained by the regulator from an advisory council or any other entity the regulator considers appropriate before deciding the application, for example, any advice the regulator has sought from water quality experts such as microbiologists about the application which the regulator considers appropriate
- the water quality criteria for recycled water.

### 6.1. Decisions by the regulator

The regulator may decide to either:

- grant the exemption without regulator condition; or
- grant the exemption with regulator conditions; or
- refuse to grant the exemption.

Information on appeals against the regulator's decision is contained in the information notice for the decision sent to the recycled water provider by the regulator<sup>14</sup>.

### 6.2. Conditions applicable to an exemption

As stated in section 3.1 of this guideline the Act provides for different conditions to apply to granted exemptions. These are:

- a statutory condition which is specifically stated in the legislation and which applies to all exemptions. These conditions apply regardless of whether or not they are placed on the exemption.
- regulator conditions which are scheme specific and placed on the exemption by the regulator.

The recycled water provider will also need to comply with any statutory obligations required by the Act. These statutory obligations are listed in section 3.2 of this guideline.

**Note:** Exemptions are only valid if the recycled water provider complies with the conditions of the exemption.

### 6.3. Duration of exemption

Where an exemption has been granted, it only applies for the period of time nominated by the regulator. The period of time cannot exceed five years (section 255 of the Act).

An exemption only applies if the recycled water provider complies with the conditions of the exemption (section 256(4) of the Act). The time period for which the exemption remains in force will be stated on the information notice for the decision or the notice of the decision provided by the regulator, which outlines the decision to approve the exemption.

If the recycled water provider wishes to continue to supply recycled water under a granted exemption, they will need to apply for a new exemption. The recycled water provider should submit the new exemption application at least 60 business days before their current exemption expires to allow time for the regulator to assess the application. If the current exemption expires before a new exemption is granted, the recycled water provider must cease supply until they have a new exemption.

The regulator may also, under section 257 of the Act, amend or cancel the exemption at any time:

- after the recycled water provider informs the regulator that circumstances under which the exemption was given have changed

<sup>14</sup> Appeal rights do not apply where the regulator grants the exemption without regulator conditions.

- the regulator otherwise becomes aware of a change in the circumstances under which the exemption was given
- the regulator is satisfied the recycled water provider has not complied with a condition of the exemption.

If the regulator decides to amend or cancel the exemption they must give the recycled water provider an information notice for the decision stating the reasons for its decision. If the exemption is cancelled by the regulator, the recycled water provider must immediately stop supply of recycled water under the scheme. The recycled water provider cannot resume supply until it has applied and has either an exemption granted or RWMP approved by the regulator.

## 7. Glossary

**Note:** The recycled water provider or scheme manager should refer to the *Water Supply (Safety and Reliability) Act 2008* for the meaning of the terms. However, terms referred to in this guideline are provided below for your convenience. Terms with \* are taken from Schedule 3 of the Act.

Term	Meaning
AGWR	<p>The Australian Guidelines for Water Recycling suite of guidelines developed by Environment Protection and Heritage Council. These guidelines include:</p> <ul style="list-style-type: none"> <li>• Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (AGWR Phase 1).</li> <li>• Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Augmentation of Drinking Water Supplies (AGWR Phase 2 Module 1).</li> <li>• Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Stormwater Harvesting and Reuse (AGWR Phase 2 Module 2).</li> <li>• Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Managed Aquifer Recharge (AGWR Phase 2 Module 3).</li> </ul>
Approved recycled water management plan (RWMP)	A recycled water management plan approved by the regulator and not suspended or cancelled, under Chapter 3.*
Annual Reporting Guideline for Recycled Water Schemes	The guidelines issued by the regulator under section 571(1)(m) of the Act.
Coal seam gas	Petroleum (in any state) occurring naturally in association with coal or oil shale, or in strata associated with coal or oil shale mining.*
Coal seam gas (CSG) water	Underground water brought to the surface of the earth in connection with exploring for or producing coal seam gas, and includes coal seam gas water— <ul style="list-style-type: none"> <li>(a) whether it is treated or untreated; or</li> <li>(b) that is mixed with other water.*</li> </ul>
Commissioning verification	A type of validation, but is distinct from other validation methods, because it is done by testing the end product water. This is performed to prove that the expected water quality is being consistently produced.
Conditions	<p>Condition—</p> <ul style="list-style-type: none"> <li>(a) of an approved recycled water management plan, means— <ul style="list-style-type: none"> <li>(i) any regulator conditions for the plan; or</li> <li>(ii) a condition mentioned in section 208(2), (3), (5) or (6) of the Act that applies to the plan; and</li> </ul> </li> <li>(b) of an exemption, means— <ul style="list-style-type: none"> <li>(i) any regulator conditions for the exemption; or</li> <li>(ii) the condition mentioned in section 256(1) of the Act.*</li> </ul> </li> </ul>
Control measure (preventative measure)	Any action or activity that can be used to prevent, eliminate or reduce a hazard to an acceptable level.
Critical recycled water scheme	A recycled water scheme declared to be a critical recycled water scheme under Chapter 3 of the Act.*
CSG recycled water scheme	A recycled water scheme under which recycled water that is coal seam gas water is supplied, or produced and supplied.*
Declared entity	For a multiple-entity recycled water scheme, means each recycled water provider and other entity, other than the scheme manager for the scheme, declared to be part of the scheme under Chapter 3, part 8 of the Act.*
Exemption	Means an exemption granted from having an approved RWMP for the scheme under Chapter 3, part 5 of the Act.
Heavily processed food	Includes but is not limited to those crops that are heavily processed before

\* From Schedule 3 of the Act.

Term	Meaning
crops	consumption, for example sugar cane, cocoa, cereal crops (wheat, rice and corn) grown for flour production and crops grown for oil production such as sunflower, canola and flax seed.
Industry code or best practice management document	A published standard, by a body the regulator considers being a recognised industry body.
Minimally processed food crops	As defined in the Public Health Regulation, includes carrot, onion, pumpkin, rockmelon, broccoli, cabbage, tomato, avocado, banana, mango, apple, olive, peach, herbs and lettuce.
Multiple-entity recycled water scheme	<ol style="list-style-type: none"> <li>1. A multiple-entity recycled water scheme means a scheme involving— <ol style="list-style-type: none"> <li>(a) the production and supply of recycled water other than coal seam gas water; or</li> <li>(b) the production and supply, or supply only, of recycled water that is coal seam gas water;</li> </ol> by more than 1 recycled water provider, or at least 1 recycled water provider and another entity. </li> <li>2. A multiple-entity recycled water scheme is made up of— <ol style="list-style-type: none"> <li>(a) each recycled water provider and other entity declared to be part of the scheme under a declaration for the scheme made under chapter 3, part 8; and</li> <li>(b) the infrastructure for— <ol style="list-style-type: none"> <li>(i) the production and supply of the recycled water; or</li> <li>(ii) if the recycled water is coal seam gas water, the production and supply, or the supply only, of the recycled water;</li> </ol> that is stated to be part of the scheme under the declaration.* </li> </ol> </li> </ol>
NATA	National Association of Testing Authorities
Non-critical scheme	A scheme which has not been declared by the regulator as critical under section 304 of the Act.
DERM	The Department of Environment and Resource Management
Point of supply	The point of supply is the point at which the monitoring of the final water quality is undertaken. This point is also where the water quality criteria for the scheme apply. Ideally, the point of supply should be at, or as close as possible to, the point where the recycled water is transferred to the user (physical transfer point).
Public open spaces	Any open space, such as parks, sporting fields, botanical gardens, racecourses, school ovals, municipal parks and gardens, golf courses, footpaths, car parks, road verges, where either members of the public, staff or employees may be exposed to recycled water. It does not include gardens in domestic residences nor agricultural farmland.
Recycled water	<ol style="list-style-type: none"> <li>(a) Any of the following that are intended to be reused— <ol style="list-style-type: none"> <li>(i) sewage or effluent sourced from a service provider's sewerage</li> <li>(ii) wastewater, other than water mentioned in subparagraph (i); or</li> </ol> </li> <li>(b) coal seam gas water that augments a supply of drinking water.*</li> </ol>
Recycled Water Management Plan (or RWMP)	<ol style="list-style-type: none"> <li>(a) for a single-entity recycled water scheme—a plan about— <ol style="list-style-type: none"> <li>(i) the production and supply of recycled water other than coal seam gas water under the scheme by the recycled water provider for the scheme; or</li> <li>(ii) the production and supply, or supply only, of recycled water that is coal seam gas water under the scheme by the recycled water provider for the scheme; or</li> </ol> </li> <li>(b) for a multiple-entity recycled water scheme—a plan about— <ol style="list-style-type: none"> <li>(i) the production and supply of recycled water other than coal seam gas water under the scheme; or</li> <li>(ii) the production and supply, or supply only, of recycled water that is coal seam gas water under the scheme;</li> </ol> consisting of a scheme manager plan and a scheme provider plan for each declared entity for the scheme.* </li> </ol>

Term	Meaning
Recycled Water Management Plan and Validation Guideline	The guidelines issued by the regulator under section 571(1)(h) & (i) of the Act.
Recycled Water Management Plan Audit Reporting Guideline	The guidelines issued by the regulator under section 571(1)(l) of the Act.
Recycled Water Management Plan Exemption Guideline	The guidelines issued by the regulator under section 571(1)(j) of the Act.
Recycled water provider	<p>(a) An entity that—</p> <ul style="list-style-type: none"> <li>(i) owns infrastructure for the production and supply of recycled water other than coal seam gas water; or</li> <li>(ii) the production and supply, or the supply only, of recycled water that is coal seam gas water ; or</li> </ul> <p>(b) another entity, prescribed under a regulation, that owns infrastructure for the supply of recycled water other than coal seam gas water.*</p>
Recycled water scheme	A single-entity or a multiple-entity recycled water scheme.*
Regulator	The chief executive of the Department of Environment and Resource Management (DERM).
Regulator conditions	For an exemption—see section 253(1) of the Act.*
Reused	In relation to recycled water, includes being treated to improve the water's quality, but does not include merely being discharged into, or disposed of in, the environment.
Risk	The likelihood that identified hazards will cause harm in exposed populations including the magnitude of that harm (Risk = likelihood x impact).
Scheme manager	<p>The scheme manager for a multiple-entity recycled water scheme is the entity—</p> <ul style="list-style-type: none"> <li>(a) the recycled water providers and other entities declared to be part of the scheme agree is the scheme manager for the scheme; and</li> <li>(b) either— <ul style="list-style-type: none"> <li>(i) stated in the declaration under Chapter 3, part 8 of the Act for the scheme to be the scheme manager; or</li> <li>(ii) stated in the notice given under section 307(2) of the Act.</li> </ul> </li> </ul>
Service provider	<p>A service provider includes—</p> <ul style="list-style-type: none"> <li>(a) a local government that owns infrastructure for supplying water or sewerage services</li> <li>(b) a water authority that owns infrastructure for supplying water or sewerage services</li> <li>(c) each person who is— <ul style="list-style-type: none"> <li>(i) the owner of one or more elements of infrastructure for supplying water or sewerage services for which a charge is intended to be made; or</li> <li>(ii) a person nominated in a regulation as a related entity of a person who is the owner of one or more elements of infrastructure for supplying water or sewerage services for which a charge is intended to be made.</li> </ul> </li> </ul> <p>A service provider does not include a person who owns infrastructure, that produces and supplies recycled water, or that supplies recycled water that is coal seam gas water, unless the person also owns other infrastructure for supplying a water or sewerage service</p>
Sewage	<ul style="list-style-type: none"> <li>• Household and commercial wastewater that contains, or may contain, faecal, urinary or other human waste.</li> </ul>
Sewerage	A sewer, access chamber, vent, engine, pump, structure, machinery, outfall or other work used to receive, store, transport or treat sewage.
Single-entity recycled water scheme	<p>(a) means a scheme involving—</p> <ul style="list-style-type: none"> <li>(i) the production and supply of recycled water, other than coal seam gas water, by only 1 recycled water provider; or</li> <li>(ii) the production and supply, or supply only, of recycled water that is coal seam gas water by only 1 recycled water provider; and</li> </ul>

Term	Meaning
	(b) includes infrastructure, owned by the provider, for the production and supply, or the supply only, of the water.*
Source water	Any water destined for further use. This includes, but is not limited to sewage (for treatment at a wastewater treatment plant) and treated sewage (for further treatment at an advanced wastewater treatment plant).
Statutory condition	Any conditions imposed under section 208 of the Act for an approved recycled water management plan or section 256 of the Act for a granted exemption.
Supply	<p>In relation to recycled water, means—</p> <p>(a) for sewage or effluent that is recycled water—</p> <p>(i) reuse of the recycled water by the entity that produces it; or</p> <p>(ii) supply of the recycled water, by the entity that produces it, to another entity for reuse; or</p> <p>(b) for coal seam gas water that is recycled water—</p> <p>(i) release of the recycled water, directly or indirectly, into a water source, if the recycled water is used by a drinking water service provider in a drinking water service; or</p> <p>(ii) delivery of the recycled water by an entity, other than a drinking water service provider who uses the recycled water in a drinking water service, to another entity, if the recycled water is used by a drinking water service provider in a drinking water service</p> <p>(c) for other recycled water—supply of the recycled water, by the entity that produces it (the producer), to another entity for reuse, other than another entity that, under a guideline made by the regulator and prescribed under a regulation, is a related entity of the producer.*</p>
Transitional period	The transitional periods stipulated under chapter 9, part 5 of the Act, by which the recycled water provider must comply with the Act, and either have an approved RWMP or an exemption granted by the regulator or cease supply.
Wastewater	<p>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—</p> <p>(a) an agricultural activity; or</p> <p>(b) a mining activity or Chapter 5A activity as defined under the <i>Environmental Protection Act 1994</i>, schedule 4.*</p>
Water quality criteria	<p>For recycled water, means all of the following—</p> <p>(i) the standards for the quality of recycled water, relating to the sources and uses of the water, prescribed in a regulation under the <i>Public Health Act (2005)</i></p> <p>(ii) the criteria for the quality of recycled water, relating to the sources and uses of the water—</p> <p>(A) stated in a guideline, if any, made by the regulator about the quality of recycled water; or</p> <p>(B) in relation to the quality of recycled water to which a recycled water management plan or an exemption relates—stated in a regulator condition for the plan or exemption.</p> <p>Note— A recycled water scheme may have more than 1 set of water quality criteria relevant to the scheme depending on the number of different purposes for which water is supplied.*</p>
Water Quality Guideline for Recycled Water Schemes	The guidelines prescribed by the regulator under section 571(1)(g) of the Act.

## 8. References

- NHMRC-NRMMC (National Health and Medical Research Council and Natural Resource Management Ministerial Council, (2004) Australian Drinking Water Guidelines, NHMRC and NRMMC, Canberra
- NRMMC–EPHC–AHMC (Natural Resources Ministerial Management Council; Environment Protection and Heritage Council; Australian Health Ministers’ Conference) (2006). Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1), NRMMC, EPHC and AHMC, Canberra
- NHMRC-NRMMC (National Health and Medical Research Council and Natural Resource Management Ministerial Council) (2009) Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Stormwater harvesting and reuse, NRMMC, EPHC and AHMC, Canberra
- NRMMC–EPHC–NHMRC (Natural Resource Management Ministerial Council, Environment Protection and Heritage Council, National Health and Medical Research Council), (2008) Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) Augmentation of Drinking Water Supplies, NRMMC, EPHC and AHMC, Canberra
- NHMRC-NRMMC (National Health and Medical Research Council and Natural Resource Management Ministerial Council) (2009) Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) Managed Aquifer Recharge, NRMMC, EPHC and AHMC, Canberra
- The State of Queensland Environmental Protection Agency (2005) Queensland Water Recycling Guidelines, Brisbane, Queensland
- The State of Queensland Environmental Protection Agency (2005) Manual for recycled water agreements in Queensland, Brisbane, Queensland
- WSAA (Water Services Association of Australia) (2008) National Wastewater Source Management Guideline

# Appendix 1: Table of uses eligible for an application for an exemption from having an approved RWMP

As discussed in section 2.1 of this guideline, the table below provides a list of control measures for a range of recycled water uses and classes that are likely to be considered appropriate for the granting of an exemption from having an approved RWMP.

**Note: This table is a guide only. It is the responsibility of the recycled water provider to ensure that mandatory legislative requirements for an exemption are met.**

<b>Open space irrigation—including: sports grounds, golf courses, parks, landscaped areas (residential, cemeteries, show grounds), median strips, turf, trees, shrubs, school grounds (excluding day care centres, kindergartens), bowls clubs, botanical gardens, racecourses, ornamental gardens</b>			
<b>Water Class</b>	<b>Control measures</b>	<b>Monitoring parameters</b>	<b>Frequency</b>
A+	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of Australia/New Zealand Standard 3500 Plumbing and Drainage Part 1: Water Services (AS/NZS 3500.1), including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily
A	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– If using surface irrigation methods, there is to be no overspray of the property boundary, pedestrian paths and walkways.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Turbidity – <2 (95%ile) or 5 (max) NTU	Continuous/ daily
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily
B	<ul style="list-style-type: none"> <li>– If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>– Drip or subsurface irrigation must be used if access is not restricted.</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– Use spray drift controls to prevent drift beyond irrigation area are to be used for spray irrigation.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily

	(for example, low-throw sprinklers, vegetation screening). <ul style="list-style-type: none"> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>		
C	<ul style="list-style-type: none"> <li>– If using surface irrigation methods, restricted or no access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>– Drip or subsurface irrigation must be used if access is not restricted.</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam or rainwater tanks likely to be used to supply water for human consumption.</li> <li>– A minimum buffer of 100m from nearest road or dwelling (during times of high wind) is required when using high pressure spray irrigation ≥200psi.</li> <li>– Use spray drift controls to prevent drift beyond irrigation area for spray irrigation. (for example, low-throw sprinklers, vegetation screening).</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> </ul> <p>Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</p>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily

**Processed food crops**—includes: wheat, sugar cane, tea and coffee (excludes minimally processed food crops)

Water Classes	Control measure	Monitoring parameters	Frequency
A+	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily
A	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– If using surface irrigation methods, there is to be no overspray of the property boundary, pedestrian paths and walkways.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily
		Turbidity – <2 (95%ile) or 5 (max) NTU	Continuous/ daily

B	<ul style="list-style-type: none"> <li>- If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>- Drip or subsurface irrigation must be used if access is not restricted.</li> <li>- A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>- There is to be no surface runoff or ponding of recycled water.</li> <li>- Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> <li>- A minimum buffer of 100m from nearest road or dwelling (during times of high wind) is required when using high pressure spray irrigation <math>\geq 200</math>psi.</li> <li>- Use spray drift controls to prevent drift beyond irrigation area for spray irrigation. (for example, low-throw sprinklers, vegetation screening)</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily
C	<ul style="list-style-type: none"> <li>- If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>- Drip or subsurface irrigation must be used if access is not restricted.</li> <li>- A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>- Use spray drift controls to prevent drift beyond irrigation area for spray irrigation (for example, low-throw sprinklers, vegetation screening).</li> <li>- If no drift controls present for spray irrigation then the minimum buffer must be 50m from public access areas.</li> <li>- A minimum buffer of 100m from nearest road or dwelling (during times of high wind) is required when using high pressure spray irrigation <math>\geq 200</math>psi.</li> <li>- Produce is not to be wet with recycled water when harvested.</li> <li>- There is to be no surface runoff or ponding of recycled water.</li> <li>- Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 0.2–2mg/L Contact time of 30mins	Continuous/ daily

**Irrigation for livestock use**—includes: pasture, stock feed, fodder crops

Water Classes	Control measure	Monitoring parameters	Frequency
A+	<ul style="list-style-type: none"> <li>- A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>- There is to be no surface runoff or ponding of recycled water.</li> <li>- Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	

	<p>Note: Helminth treatment may be required and the regulator may require testing for helminthic eggs.</p>	<p>Cl<sub>2</sub> residual – 1mg/L</p>	<p>Continuous/ daily</p>
<p>A/B</p>	<ul style="list-style-type: none"> <li>– If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– A minimum buffer of 100m from nearest road or dwelling (during times of high wind) is required when using high pressure spray irrigation ≥200psi.</li> <li>– Use spray drift controls to prevent drift beyond irrigation area for spray irrigation (for example, low-throw sprinklers, vegetation screening).</li> <li>– A minimum buffer of 30m from public roads, dwellings or public access areas is required for spray irrigation.</li> <li>– A Withholding period of 4 hours is required before pasture used for dairy animals or if there is no withholding period then dry or store fodder before use.</li> <li>– There are to be controls present to exclude pigs from exposure to pasture or fodder.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul> <p>Note: Helminth treatment may be required and the regulator may require testing for helminthic eggs.</p>	<p><i>E. coli</i></p>	<p>Weekly</p>
<b>Possible regulator set parameters and monitoring frequencies</b>			
<p>C</p>	<ul style="list-style-type: none"> <li>– There is to be no public access during and 4hrs after irrigation or until dry.</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– A minimum buffer of 30m from public roads, dwellings or public access areas is required.</li> <li>– Use spray drift controls to prevent drift beyond irrigation area for spray irrigation (for example, low-throw sprinklers, vegetation screening).</li> <li>– If no drift controls present for spray irrigation then the minimum buffer must be 50m from public access areas.</li> <li>– A minimum buffer of 100m from nearest road or dwelling (during times of high wind) is required when using high pressure spray irrigation ≥200psi.</li> <li>– Grazing dairy animals are to be excluded for 5 days after irrigation.</li> <li>– A withholding period of 4hrs is required for all other grazing animals (for example, beef cattle, sheep, goats, horses) before pasture use.</li> <li>– If there is no withholding period then dry or store fodder before use.</li> </ul>	<p>Cl<sub>2</sub> residual – 1mg/L</p>	<p>Continuous/ daily</p>
		<p>Helminths ≤1 helminth egg/L <i>Taenia saginata</i> (for cattle) <i>Taenia solium</i> (for pigs)</p>	<p>Weekly</p>

	<ul style="list-style-type: none"> <li>– There are to be controls present to exclude pigs from exposure to pasture or fodder.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>		
<b>Non-food crops</b> —includes: silviculture, hard wood plantations, turf farms, forestry, woodlots, cotton, carbon sequestration projects			
Water Classes	Control measure	Monitoring parameters	Frequency
A+	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<b>Class A+:</b>	
		<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Turbidity – 2 (95%ile) 5 (max) NTU	Continuous/daily
Cl <sub>2</sub> residual	Continuous/daily		
A	<ul style="list-style-type: none"> <li>– Restricted access permitted</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– There is to be no surface runoff or ponding of recycled water</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual	Continuous/daily
B	<ul style="list-style-type: none"> <li>– If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>– Alternatively if using drip, furrow or subsurface irrigation unrestricted public access is permitted.</li> <li>– A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– If using spray irrigation a minimum buffer of 30m from public roads, dwellings or public access areas is required.</li> <li>– A minimum buffer of 100m from roads, dwellings or public access areas is required for high pressure spray irrigation ≥200psi.</li> <li>– If there is no minimum buffer, use spray drift controls to prevent drift beyond irrigation area for high pressure spray irrigation (for example, low–throw sprinklers, vegetation screening).</li> <li>– There is to be no surface runoff or ponding of recycled water.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 1mg/L	Continuous/daily

	<ul style="list-style-type: none"> <li>Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>		
C	<ul style="list-style-type: none"> <li>If using surface irrigation methods, restricted access is required (for example, fencing) during and for 4hrs after use or until dry.</li> <li>A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>If using spray irrigation a minimum buffer of 50m from roads, dwellings or public access areas is required.</li> <li>A minimum buffer of 100m from roads, dwellings or public access areas is required for high pressure spray irrigation <math>\geq 200</math>psi.</li> <li>If there is no minimum buffer, use spray drift controls to prevent drift beyond irrigation area (for example, low-throw sprinklers, vegetation screening).</li> <li>There is to be no surface runoff or ponding of recycled water.</li> <li>Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 1mg/L	Continuous/daily
D	<ul style="list-style-type: none"> <li>There is to be no spray irrigation.</li> <li>There is to be no public access during and 4hrs after irrigation or until dry.</li> <li>A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>If using drip irrigation a minimum buffer of 20m from nearest road or dwelling is required.</li> <li>There is to be no surface runoff or ponding of recycled water.</li> <li>Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Turbidity – 2 (95%ile) 5 (max) NTU	Continuous/daily
		Cl <sub>2</sub> residual – 1mg/L	Continuous/daily
<b>Flowers</b> —Retail nurseries and flower farms			
<b>Water Classes</b>	<b>Control measure</b>	<b>Monitoring parameters</b>	<b>Frequency</b>
A+	<ul style="list-style-type: none"> <li>A minimum horizontal distance of 250m is required from the edge of the irrigation area to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>Irrigation over pedestrian paths and walkways must occur whilst no access by the public.</li> <li>There is to be no surface runoff or ponding of recycled water.</li> <li>Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 1mg/L	Continuous/daily

<b>Fountains, ornamental ponds and water features</b> —Visual use with no contact			
<b>Water Classes</b>	<b>Control measure</b>	<b>Monitoring parameters</b>	<b>Frequency</b>
A+	<ul style="list-style-type: none"> <li>– A minimum horizontal distance of 250m is required from the edge of the fountain, pond or feature to any bore, dam, rainwater tank or other water storage likely to be used to supply water for human consumption.</li> <li>– A minimum vertical distance of 150m to potable water supply bore is required if bottom not sealed.</li> <li>– Compliance with the requirements of AS/NZS 3500.1, including warning and/or prohibition signs, purple colour coding of recycled water meters, external recycled water fittings and pipes, backflow prevention devices and mechanisms to prevent cross connections.</li> </ul>	<i>E. coli</i>	Weekly
		<i>Clostridium perfringens</i>	Weekly
		F–RNA bacteriophages	Weekly
		Somatic coliphages	Weekly
		Turbidity	Daily
		<b>Possible regulator set parameters and monitoring frequencies</b>	
		Cl <sub>2</sub> residual – 1mg/L	Continuous/ daily