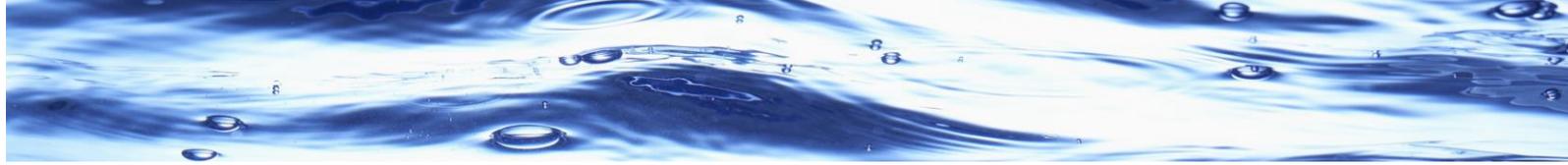


The use of non-reticulated water in food businesses- A guide for local governments



South East Queensland
Food Safety and Public Health Working Group



FOREWORD

It may be taken for granted that the majority of food businesses within many local government areas operate solely on municipal reticulated water supplies. However, often rural or remote food businesses, as well as those that simply fall outside the reticulation system, do not have access to reticulated water and obtain water from other sources. Such sources of water may include rivers, creeks, bores, dams and rainwater tanks.

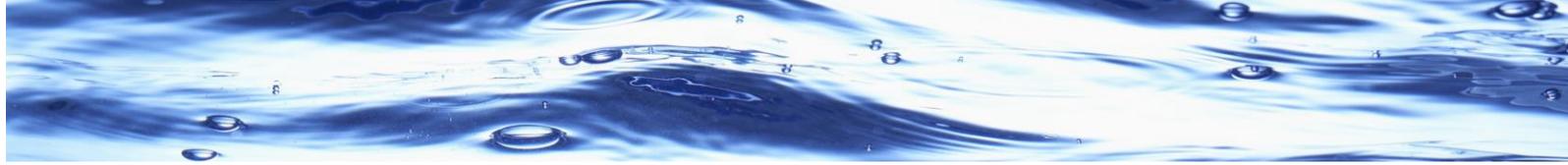
Non-reticulated water sources may be contaminated with a range of disease-causing microorganisms and harmful chemicals and therefore necessary precautions should be taken to reduce the potential health risk from exposure to these water sources. In most cases, the water quality and potable nature of these sources cannot be ascertained without treatment or testing.

Food businesses can develop and implement Water Supply Management Plans to manage potential health risks by identifying possible sources of contaminants, taking preventative measures to reduce the likelihood of contamination, implementing treatment methods and monitoring water quality to ensure that the water is potable.

Thanks to NSW Health for permitting the use of material from its publication *Private Water Supply Guidelines*.

Disclaimer

The contents of this document have been compiled using a range of source material and while due care has been taken in its compilation, the South East Queensland Food Safety and Public Health Working Group and the organisations and individuals involved with the compilation of this document shall not be liable for any consequences which may result from using the contents of this document. You should therefore make independent inquiries, and obtain appropriate advice, before relying on the information in any important matter.



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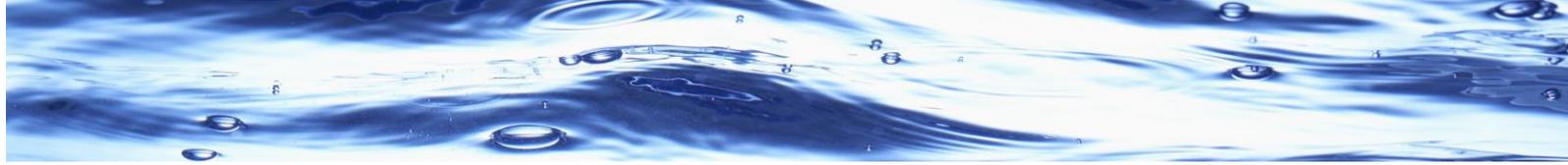
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SCOPE

The South East Queensland Food Safety and Public Health Working Group has prepared this document to assist local governments to provide guidance to food businesses utilising non-reticulated water sources on complying with *Food Safety Standard 3.2.3*. This document has not been developed for distribution to food businesses.

INTRODUCTION

The provision of non-reticulated water is water provided by means other than the reticulation system. Reticulation is the wires, pipes or ducts which convey services through a town or building, usually maintained by water utilities or local government¹.

Although it is preferential for food businesses to use reticulated water, often it is an unreasonable expectation given the limit of reticulated water service in some areas. For businesses that cannot provide reticulated water to their premise, the provision of potable water by other means is a requirement.

This document outlines the legislative requirements associated with the use of non-reticulated water in food businesses and has been developed to enable Council officers to assist food businesses to develop and implement Water Supply Management Plans.

NON-RETICULATED WATER IN FOOD PREMISES

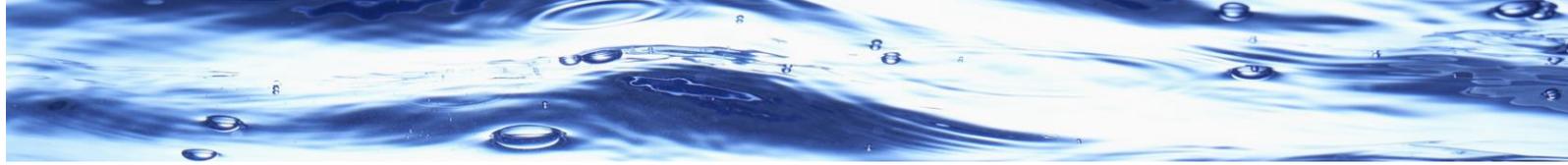
Many areas do not have regular or consistent access to reticulated water sources. Non-reticulated water sources include:

- 💧 *Rainwater (e.g. tank water)*
- 💧 *Surface water (e.g. river or lake)*
- 💧 *Ground water (e.g. bore water)*
- 💧 *Trucked water (e.g. water carrier licensed under the Food Act 2006)*

When food businesses fall into this category and choose to utilise non-reticulated water in their premise, it is important that processes are in place to ensure the water is potable. These processes should be documented in a Water Supply Management Plan.

There are two significant hazards associated with non-reticulated water. Depending on the source of the water, there is a possibility that water may contain microbiological or chemical contamination. Both forms of contamination pose significant health risks if used for human consumption or in the preparation of food.

¹ Macquarie Dictionary Publishers Pty Ltd (2009), *Macquarie Dictionary*, Fifth Edition.



NATIONAL HISTORICAL OUTBREAK DATA

OzFoodNet, an Australian national network for the surveillance of foodborne diseases, has collated information on waterborne outbreaks of gastroenteritis for all transmission routes in Australia between 2001 and 2007. During this period of time, drinking water was the suspected source for 19% of waterborne gastroenteritis outbreaks. These outbreaks resulted in 189 cases of illness, three hospitalisations and one death.

The water sources of the outbreaks included rainwater tanks; bores; and in one case, a creek. The organisms causing the outbreaks also varied, including *Salmonella sp.*, *Campylobacter jejuni* and *Giardia*. There are significant difficulties in identifying and categorising gastroenteritis outbreaks and this can often result in misclassification or underestimation of water-associated events².

LEGISLATIVE REQUIREMENTS

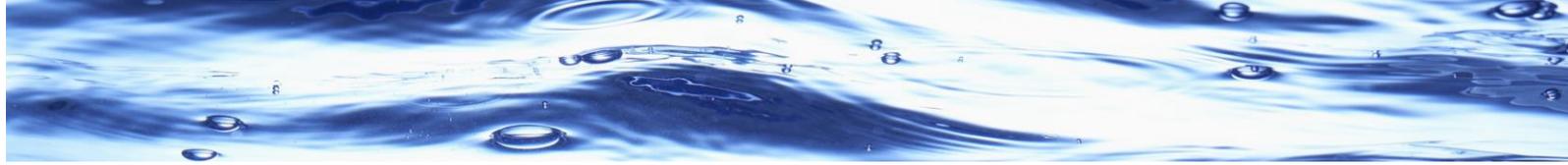
According to *Food Safety Standard 3.2.3* potable water means water that is acceptable for human consumption³.

Clause 4 of *Food Safety Standard 3.2.3* requires the following:

1. Food premises must have an adequate supply of water if water is to be used at the food premises for any of the activities conducted on the food premises.
Note: adequate supply of water means potable water that is available at a volume, pressure and temperature that is adequate for the purposes for which the water is used.
2. Subject to subclause 3, a food business must use potable water for all activities that use water that are conducted on the food premises.
3. If a food business demonstrates that the use of non-potable water for a purpose will not adversely affect the safety of the food handled by the food business, the food business may use non-potable water for that purpose³.

² Dale, K., Kirk, M., Sinclair, M., Hall, R., Leder, K. (2010), *Reported waterborne outbreaks of gastrointestinal disease in Australia are predominantly associated with recreational exposure*, *Australia New Zealand Journal of Public Health*, Vol 34. No. 5.

³ Food Standards Australia New Zealand (FSANZ) (2012), *Australia New Zealand Food Standards Code Standard 3.2.3 Food Premises and Equipment*, Version F2012C00774.



Clause 14(2)(b) of *Food Safety Standard 3.2.3* also requires:

That hand washing facilities must be connected to, or otherwise provided with, a supply of warm running potable water³.

Potable water must be used in a food premise for the following activities:

- 💧 *Washing food*
- 💧 *Adding to food and drinks*
- 💧 *Cooking*
- 💧 *Washing food ingredients*
- 💧 *Making ice*
- 💧 *Washing hands and personal hygiene*
- 💧 *Cleaning of food containers and utensils*
- 💧 *Cleaning of food contact surfaces*

Non-potable water can only be used in a food premise when it will not affect food safety. Possible uses include the flushing of toilets or cleaning non-food contact surfaces such as floors.

ASSESSING FOOD BUSINESS APPLICATIONS

The assessment of an application for a food business operating with non-reticulated water must be conducted with particular care. In most cases, specific requirements will be conditioned on the approval for the food operation. By placing conditions on the food business approval relating to the treatment and monitoring of non-reticulated water sources, local governments can ensure compliance with these specific requirements. It is important that at the application stage that the food business demonstrates that potable water is achievable.

The food business may need a water licence from the Department of Natural Resources and Mines (depending upon the source of water). For further information, refer the food business to www.nrm.qld.gov.au.



STANDARD CONDITIONS

The following conditions can be placed on food businesses regarding the use of non-reticulated water:

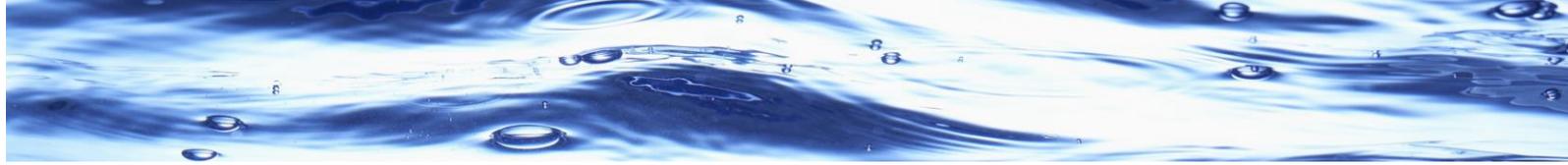
- Implement and maintain the approved Water Supply Management Plan.
- The licensee must collect at least one sample of water from within the food premises monthly (*replace with other frequency if necessary*) and have such sample scientifically analysed for the presence of *E.Coli* (*insert other parameters if necessary*) by a NATA approved laboratory to ensure compliance with the *Australian Drinking Water Guidelines*⁴.
- The licensee must retain scientific analysis results of water samples on site and make such results available for viewing by authorised persons on request.
- Should a scientifically analysed sample show that the results of a Standard Water Analysis does not meet the *Australian Drinking Water Guidelines*⁴, appropriate measures must be taken to provide potable water to the food business.

If a local government does not wish to impose conditions relating to a non-reticulated water supply when assessing an application or renewing a licence under the *Food Act 2006*, the local government can provide defects in writing (following an inspection) or outline reasonable steps within an improvement notice.

Please refer below for some draft defects in relation to *Food Safety Standard 3.2.3* Clause 4:

- Ensure that an adequate supply of water is provided to the food premises for use with the activities conducted on the premises. Note: An 'adequate supply of water' means potable water (water that is acceptable for human consumption) 'that is available at a volume, pressure and temperature that is adequate for the purposes for which the water is used' (*Food Safety Standard 3.2.3*).
- Demonstrate that the use of non-potable water for the purpose of (INSERT TEXT) will not adversely affect the safety of the food handled by the food business.
- Cease using the existing water supply for activities conducted on the food premises that require potable water. The water supply to the food premises must be potable water. At the time of assessment (INSERT TEXT). Note: Potable water 'means water that is acceptable for human consumption' (*Food Safety Standard 3.2.3*).

⁴ NHMRC, NRMCMC (2011) *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*. National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra.



ENFORCEMENT OPTIONS

Enforcement for the use of unsafe water within food premises should be undertaken in accordance with the *Food Act 2006* and the *Food Standards Code*. Possible enforcement actions under the *Food Act 2006* include, but are not limited to; improvement notices, show cause notices, suspension or cancellation of licence and prescribed infringement notices⁵. For further guidance on enforcement options, refer to the *Food Act 2006* and supporting documents. Note: enforcement options for public health risks are also available under the *Public Health Act 2005*.

Examples of reasonable steps that can be outlined in improvement notices are as follows:

- Conduct water quality testing on water from within the food premises (via a NATA certified laboratory) to ensure that the water supply complies with the current *Australian Drinking Water Guidelines*. Provide a copy of the analysis report to (INSERT TEXT) within (INSERT TEXT) days of receiving the analysis results.
- Conduct microbiological analysis of water from within the food premises (via a NATA certified laboratory) to ensure the water supply complies with the parameter for *E. coli* ('should not be detected in a minimum of 100ml sample') as set by the current *Australian Drinking Water Guidelines*. Provide a copy of the analysis report to (INSERT TEXT) within (INSERT TEXT) days of receiving the analysis results.
- Adequately treat the water supply used for all activities that use water that are conducted on the food premises. The water supply to the food premises must be potable water. At the time of assessment (INSERT TEXT). Note: Potable water 'means water that is acceptable for human consumption' (*Food Safety Standard 3.2.3*).
- Implement a Water Supply Management Plan at the premises.

⁵ Queensland Government (2012), *Food Act 2006 [QLD]*, Reprint No. 2C.



DEVELOPING A WATER SUPPLY MANAGEMENT PLAN

Essential to food businesses safely utilising non-reticulated water is the development and implementation of a Water Supply Management Plan which considers possible sources of contaminants, preventative measures to reduce the likelihood of contamination, treatment methods and water quality monitoring to ensure that the water is potable⁶. There are four major steps:

- Step 1- Identify health risks
- Step 2- Implement preventative measures
- Step 3- Implement treatment methods
- Step 4- Establish monitoring procedures

These are discussed in more detail in the following pages. Refer also to the Water Supply Management Plan template at the conclusion of this guide and *AS/NZS ISO 31000:2009, Risk Management- Principles and Guidelines*.

STEP 1 – IDENTIFY HEALTH RISKS

The primary health risk associated with the consumption of non-reticulated water is microbiological contamination of the water source. Such contamination can be associated with viruses, bacteria such as *Campylobacter*, *E. coli* and *Salmonella*, as well as water-borne parasites such as *Giardia* or *Cryptosporidium*. These microorganisms are harmful and are not visible in water.

Chemical contamination of a water source can also be significantly harmful to human health. Although health issues generally occur over a long period of time due to chronic exposure, chemical contamination at high concentrations can also pose acute health risks. Depending on the water source location, surrounding land uses and storage conditions, any number of chemicals could be present in the water.

Use the following table to identify the possible health risks from using non-reticulated water within a food premise.

⁶ NSW Health (2007) *Private Water Supplies Guidelines*, Water Supply Management Plan- Template Form



Table 1- Possible health risks of using non-reticulated water in a food premise.

Contamination	Possible sources	Risk Factors	Health Risks
Micro-biological contamination	<ul style="list-style-type: none"> - Generally human and animal waste into rainwater tanks, dams or other water sources. 	<ul style="list-style-type: none"> - Pathogenic (disease-causing) organisms of concern include bacteria, viruses and protozoa 	<ul style="list-style-type: none"> - Diseases can vary in severity from mild gastroenteritis to severe and sometimes fatal diarrhoea, dysentery, hepatitis, cholera or typhoid fever.
Contamination	Possible sources	Risk Factors	Health Risks
Chemical contamination	<ul style="list-style-type: none"> - Natural leaching from soils, rocks and mineral deposits. - Land-use activities in groundwater or surface water catchments. - Run-off from agricultural operations 	<ul style="list-style-type: none"> - Organic compounds such as disinfection by-products, pesticides or petroleum, pharmaceuticals and endocrine disrupting compounds. 	<ul style="list-style-type: none"> - Because of the range of possible contaminants, there is a significant number of adverse health risks associated with chemical contamination of water. - For information on exposure to specific chemicals, please refer to the <i>Australian Drinking Water Guidelines</i>⁴.

Note: Information in the above table has been sourced from the Australian Drinking Water Guidelines⁴.

STEP 2 – IMPLEMENT PREVENTATIVE MEASURES

Use the table below to identify common sources of contaminants for different water sources and preventative measures that can be implemented.

Table 2- Common sources of contaminants for different water sources and preventative measures that can be implemented.

Water Supply	Common Sources of Contaminants	Typical Preventive Measures
Ground Water (Bore, well, spear-point, spring)	Surface water seepage. (e.g. wastewater)	Bore heads should be raised above ground level. Inspect regularly.
	Sub-surface contamination Industrial, farming land usage, landfill.	Only extract groundwater from a place where subsurface contaminants are unlikely.
	Backflow water (e.g. from animal water troughs or surface water storage)	Installation of backflow prevention device.
	Leaching from bore casings, pipes or plumbing materials (e.g. metals, pH)	Ensure that all materials in contact with water comply with <i>AS/NZ 4020:2005</i> .
	Bore head not sealed allowing ingress of fauna	Seal the bore head
Surface Water (dam, river, creek)	Surrounding land use (e.g. intensive farming, industrial)	Protect surface water storage from runoff. Inspect regularly.
	Pump and plumbing materials	Ensure that all materials in contact with water comply with <i>AS/NZ 4020:2005</i> .
	Animal and human activities (e.g. cows or recreational use)	Fence surface water storage.



Rain Water (tanks)	Roof and gutters (e.g. build up of organic matter)	First flush device, regular cleaning of roof and gutters, removal of overhanging branches. Inspect regularly.
	Roof materials (e.g. lead sheeting, peeling paint)	Ensure that all materials in contact with water comply <i>with AS/NZ 4020:2005</i> .
	Build up of sludge in tank, dirt in inlet strainers and/or insect screens.	Regular cleaning and maintenance program. In relation to sludge, the tank should be checked for sediment accumulation every 2-3 years or if sediment is present in the water flow. There are various ways that sludge can be removed from tanks: siphoning without emptying the tank, pump it out or by draining and cleaning the tank ⁷ .
	Tank materials (e.g. pH of water with concrete tanks, high metals from metallic tanks, corrosion of metals from pipes.)	Flush pipes if water has been standing in pipes. (Chemical adjustment for pH in new concrete tanks may be necessary).
	Insect, bird and animals in system (e.g. dead animals, mosquito breeding).	Ensure that all inlets and outlets to tank are screened.

Note: Information in the above table has been sourced from the *NSW Health Private Water Supply Guidelines*⁸.

⁷ EnHealth (2010), *Guidance on Use of Rainwater Tanks*

⁸ NSW Health (2007), *Private Water Supplies Guidelines*

STEP 3 – IMPLEMENT TREATMENT METHODS

In all cases where non-reticulated water is being used as the primary water source for the food business, testing should be undertaken to identify if the water is considered potable or if treatment of the water is required. Should testing identify that the water source is not potable, a food business must undertake treatment to ensure the suitability of the water source for human consumption. Although there are many treatment methods available, it is essential that the most appropriate treatment method is employed based on the water source characteristics, often this requires filtration then disinfection.

In the case that there is no access to reticulated water for a food business, sophisticated treatment measures can be employed to ensure constant compliance and maintain high water quality. However, in the circumstances of an unexpected interruption to service, it is unlikely that a permanent measure would be appropriate.

Consider the likely sources of contamination and the physical properties of the non-reticulated water source. There are a range of treatment options available and these are discussed in the tables below.

Table 3- Filtration treatment options for non-reticulated water

FILTRATION				
Treatment Method	Contaminants removed	How it works	Considerations	How to use it
Ceramic Filters	<ul style="list-style-type: none"> - Ceramic microfilters capable of filtering to 0.9 micron particle size are effective in eliminating bacteria and protozoa. 	<ul style="list-style-type: none"> - Treatment of rainwater for domestic situations and minor operations. - When the filter needs maintenance, there is no risk to water quality however the flow rate is diminished. 	<ul style="list-style-type: none"> - Low flow rate through filter makes it impractical for commercial applications. - Ineffective against viruses. - Generally not practical for use in food businesses due to low flow rate. 	<ul style="list-style-type: none"> - The ceramic system consists of a core of porous ceramic material through which water is forced. - Maintenance is required when water flow is impeded. The candle can then be manually scrubbed to expose fresh ceramic material or simply replaced.



Activated Carbon Filters	<ul style="list-style-type: none"> - Used to absorb or biologically degrade organic and inorganic chemicals or compounds causing taste or odour problems - Also can be used as pre or post-treatment for chemical disinfection. 	<ul style="list-style-type: none"> - Effective in improving the aesthetics of drinking water (taste, colour & odour). - Is suitable for the absorption of some chemical contaminants. 	<ul style="list-style-type: none"> - Not capable of removing bacteria, parasites or viruses in the filtration process. - Can increase bacterial load in water if not maintained. 	<ul style="list-style-type: none"> - Should be used as a secondary treatment method to enhance primary treatments.
Reverse Osmosis (RO)	<ul style="list-style-type: none"> - Suitable for treating bore water with high mineral or salt content. 	<ul style="list-style-type: none"> - This type of filtration works by forcing water under pressure through a semi-permeable membrane. The membrane is selectively permeable to water molecules and repels dissolved impurities. 	<ul style="list-style-type: none"> - Generally not suitable for rain water due to the presence of microbes. Some microbes can pass through RO membranes through minor imperfections, or bypass the membrane entirely by leaks in surrounding seals. 	<ul style="list-style-type: none"> - Complete RO systems may include additional water treatment stages that use ultraviolet light or ozone to prevent microbiological contamination.

Table 4- Disinfection treatment options for non-reticulated water

DISINFECTION				
Treatment Method	Contaminants removed	How it works	Considerations	How to use it
Ultraviolet Light (UV) Disinfection	<ul style="list-style-type: none"> - Effective way of removing bacteria, viruses and parasites from drinking water, provided the water being treated is clear. 	<ul style="list-style-type: none"> - Effective in small to medium sized water storage sites, for microbiological contamination. 	<ul style="list-style-type: none"> - Turbidity or cloudiness will reduce the effectiveness of UV irradiation. - UV tubes have a limited life span and in most cases must be replaced at least every 12 months. - Leaves no residual disinfection. 	<ul style="list-style-type: none"> - A prefilter application is required to ensure clarity of the water prior to UV treatment (1 micron sediment cartridge filter is suitable). - Recommended dose of UV is 16-46 mW-sec/cm².



Ozone Treatment	<ul style="list-style-type: none"> - Used as an oxidant and disinfectant. Can oxidise organic and inorganic compounds. 	<ul style="list-style-type: none"> - Ozone is a powerful oxidising agent which can be used for disinfection and controlling colour, iron, manganese, taste and odour. 	<ul style="list-style-type: none"> - Only cost effective with large volumes of water. - Ozone cannot treat for water hardness. 	<ul style="list-style-type: none"> - Typical treatment concentrations are 0.5-5mg/L. - Ozone treatment should be followed by a sediment filter to remove the bi-products of oxidation.
Chlorination	<ul style="list-style-type: none"> - Highly effective against bacteria, moderately effective against most viruses, is effective against protozoan parasite <i>Giardia</i> but ineffective against <i>Cryptosporidium</i>. 	<ul style="list-style-type: none"> - Most common form of disinfection. - Involves regulated addition of chlorine to the system. 	<ul style="list-style-type: none"> - Weekly or more frequent monitoring of chlorine at the tap inside the food premise is required to check the level of disinfection in the system. 	<ul style="list-style-type: none"> - A prefilter application is required to ensure clarity as suspended particles may prevent effective disinfection. - Effective disinfection is achieved when free chlorine measures at least 0.5mg/L.

Note: Information in the table above has been sourced from the *NSW Health Private Water Supply Guidelines*⁸ and the *Australian Drinking Water Guidelines*⁴. If a filter is used for health reasons, then it should be certified against an appropriate Standard (such as *AS/NZS 4348:1995 Water supply – Domestic type water treatment appliances - Performance requirements*).

If a water supply has been contaminated it can be manually treated with chlorine. A sufficient dose of chlorine is achieved when after waiting 30 minutes testing reveals that there is still at least 0.5mg/L present in the water⁸.

As a general guide, add:

- 125mL of liquid bleach (4% available chlorine) for every 1000 L of water in your tank, OR
- 40 mL of liquid sodium hypochlorite (12.5% available chlorine) for every 1000 L of water in your tank, (Note: Stabilised chlorine (which contains isocyanuric acid) is not effective in enclosed tanks and should not be used.), OR
- 8 grams of granular calcium hypochlorite (65% available chlorine) for every 1000 L of water in your tank. (Note: Calcium hypochlorite should be dissolved in water, in a clean plastic bucket, in the open air, before adding it to the tank. After mixing leave water to stand for one hour before use.)

Ideally the tank water should not be used for at least 24 hours after initial dosing to allow the chlorine taste and smell to dissipate and for harmful microorganisms to be destroyed. Conduct water quality testing to ensure the water is potable⁸.



STEP 4 – ESTABLISH MONITORING PROCEDURES

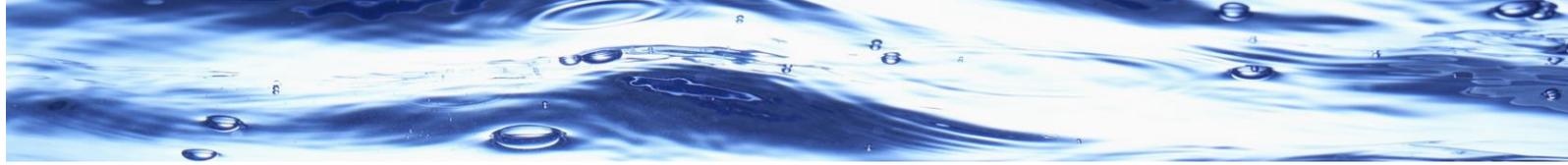
Any monitoring procedures developed for food businesses should be designed to test the non-reticulated water at the point where the water would be used in the food business. It must be to the satisfaction of the local government authority that the monitoring regime designed, is appropriate to assess the suitability and effectiveness of the chosen treatment option.

Prior to approval of a food business licence, it is recommended that all new food businesses operating with non-reticulated water, obtain an initial compliant sample of the water source at the outlet. To ensure safety of the water supply the results of testing must meet values set in the *Australian Drinking Water Guidelines (refer to Chapter 10)*⁴.

Following confirmation of compliance, it is recommended that the microbiological quality of the water is monitored at least monthly by testing for the organism *Escherichia coli (E. coli)*. If *E. coli* is detected, this indicates faecal contamination and the possible presence of disease-causing microorganisms. Further to this, the chemical and physical quality of the water should be tested at least annually and the water should be tested immediately if there is any suspicion of blue green algae (cyanobacteria) contamination⁸.

Should there be a result received from routine monitoring that does not meet the *Australian Drinking Water Guidelines*⁴, appropriate treatment methods should be undertaken and further testing conducted until repeated clear samples are received. For further advice on potable water quality contact your local Public Health Unit.

Refer to the flowchart in Appendix 1 '*Food Businesses- Managing Contamination of a Non-Reticulated Water Supply*' which summarises the risk management steps to be taken by a food business operator who has a confirmed or possibly contaminated non-reticulated water supply. This flowchart has been developed by the South East Queensland Food Safety and Public Health Working Group for Council officers to copy and distribute to food business operators.



REFERENCES

1. Macquarie Dictionary Publishers Pty Ltd (2009), *Macquarie Dictionary*, Fifth Edition.
2. Dale, K., Kirk, M., Sinclair, M., Hall, R., Leder, K. (2010), *Reported waterborne outbreaks of gastrointestinal disease in Australia are predominantly associated with recreational exposure*, *Australia New Zealand Journal of Public Health*, Vol 34. No. 5.
3. Food Standards Australia New Zealand (FSANZ) (2012), *Australia New Zealand Food Standards Code Standard 3.2.3 Food Premises and Equipment*, Version F2012C00774.
4. NHMRC, NRMCC (2011) *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*. National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra.
5. Queensland Government (2012), *Food Act 2006 [QLD]*, Reprint No. 2C.
6. NSW Health (2007), *Private Water Supplies Guidelines, Water Supply Management Plan – Template Form*.
7. EnHealth (2010), *Guidance on the Use of Rainwater Tanks*.
8. NSW Health (2007), *Private Water Supplies Guidelines*.

APPENDIX 1- FOOD BUSINESSES – MANAGING CONTAMINATION OF A NON-RETICULATED WATER SUPPLY

**Confirmed or possibly contaminated non-reticulated water supply.
E.g. Failed water quality test, failed water treatment system, contamination event.**



**STOP food production until potable water can be accessed.
Temporary measures may include: access town water, purchase bottled water, boil water or chlorinate water prior to use.
Immediately notify the local government who issued the food business licence.**



Identify the Issue

**Identify the source of microbial, chemical or physical contamination.
Conduct water quality testing if not already completed.
Refer to your Water Supply Management Plan (E.g. Is there a breakdown in the treatment process? Review maintenance records and water testing history).**



Assess the Risk

**This will vary depending on the source of the contamination.
Assess the likelihood versus consequences.**



Decide Control Measures

Determine most appropriate action. E.g. Remove the source of the contamination, repair or improve the water treatment system, chemical treatment of the contaminated water.



Implement the Control Measures

**Rectify the issue and make non-reticulated water source potable.
Conduct water quality testing to confirm the water is potable.
Notify the local government who issued the food business licence.**



Monitor and Review

**Regularly test the water quality.
Continue to monitor and review the Water Supply Management Plan.**



APPENDIX 2- FOOD BUSINESS WATER SUPPLY MANAGEMENT PLAN TEMPLATE

Name of food business	
Address of food business	
Type of food business	
Name of licensee	
Licensee contact details	
Food licence number	
Describe the non-reticulated water supply system from water source to food business. (Attach a drawing showing water source, pumps, pipes, tanks, storage and treatment.)	
Describe the intended uses of the non-reticulated water supply in the food business.	
Estimate the amount of non-reticulated water to be utilised annually	
STEP 1- IDENTIFY HEALTH RISKS	
Possible sources of contamination	Possible health risks



STEP 2- IMPLEMENT PREVENTATIVE MEASURES			
Possible sources of contamination	Preventative measure implemented	Date	Responsible person
STEP 3- IMPLEMENT TREATMENT METHODS			
Provide a summary of primary and secondary treatment methods for this food business, including frequency and who is responsible.			
Date	Treatment method implemented	Person responsible	
STEP 4- ESTABLISH MONITORING PROCEDURES			
Provide a summary of water quality monitoring procedures for this food business including frequency and who is responsible.			
Date	Document all monitoring results, maintenance, issues	Person responsible	
Emergency Contacts Including food business managers, maintenance contractors, local government and State government.			
Name, role, organisation		Contact details: phone and email	

The information in the above template has been adapted from the *NSW Health Water Supply Management Plan – Template Form*⁶.