



**LEETON SHIRE COUNCIL**  
*Preserving the Past, Enhancing the Future*

# Legionella Management Plan

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### 1.0 DEFINITIONS

“An outbreak of Legionnaires” disease is an event whereby:

- Two or more probable notifications are linked in time and place, and
- They have a history consistent with Legionnaires’ disease.

“warm-water system” means a system designed to heat and deliver water at a temperature of less than 60°C at each outlet point.

“regulated system” means:

- (a) a system referred to in section 43 of The Public Health Act, or
- (b) any system that is for the treatment of air or water and is declared by the regulations to be a regulated system for the purposes of this Part.

“regulated premises” means any premises other than premises declared by the regulations not to be regulated premises for the purposes of this Part.

“cooling-tower” means:

- (a) a device for lowering the temperature of water or other liquid by evaporative cooling, or
- (b) an evaporative condenser which incorporates a device containing a refrigerant or heat exchanger.

“water-cooling system” means a cooling tower and its associated equipment and pipe work.

“air-handling system” means a system designed for the purpose of directing air in a positive and controlled manner to and from specific enclosures by means of air-handling plant, ducts, plenums, air-distribution devices and automatic controls.

## 2.0 AIM

The aim of this Legionella Management Plan is to minimise the risk of transmissions of Legionellosis from the built environment to susceptible hosts.

The principal goals of the Management Plan are to ensure that:

- All water-cooling systems and warm-water systems are registered in accordance with the Public Health (Microbial Control) Regulation 2000;
- All water-cooling and warm-water systems comply with legislation in respect to installation, commissioning, operation and maintenance;
- Building owners and occupiers are aware of their responsibilities and understand the NSW Code of Practice for the Control of Legionnaires' Disease (2<sup>nd</sup> edition) dated 2004;
- All water-cooling systems are audited at least annually and inspected consistent with any health risk management approach adopted in the Legionella Management Plan;
- All local council staff are adequately trained and equipped to fulfil the role determined by the local council.

## 2.0 SCOPE

This document will assist the following persons to ensure compliance with the regulatory requirements in order to minimise the potential for outbreaks of Legionnaires' disease:

- Developers,
- Architects,
- Building owners and managers,
- Council's Environmental Health Officers; and
- Other government agencies.

## 3.0 BACKGROUND

Within most local government areas the built environment will contain water-cooling systems and warm-water systems. These systems can provide an ideal breeding ground for *Legionella* bacteria.

The *Legionella* bacteria can cause a type of pneumonia (an infection of the lung), which can be fatal, known as Legionnaires' disease and/or Pontiac fever (a mild flu-like illness). The disease has an incubation period from 2 to 10 days for the symptoms to develop after inhaling the bacteria. The *Legionella* bacteria may multiply in a warm water environment and are transmitted through aerosols.

Outbreaks of Legionnaires' disease occur from time to time but are preventable. *Legionella* bacteria can grow in poorly operated and maintained water-cooling systems and warm-water systems, particularly those systems which are not maintained in a clean condition and continuously treated with a biocide to control *Legionella* bacteria, algae and biofilms.

Hundreds of residents, workers and visitors may be potentially exposed to a health hazard on a daily basis if systems are not properly installed, commissioned, operated and maintained.

The Public Health Act 1991 (the Act) and the Public Health (Microbial Control) Regulation 2000 (the Regulation) control various water and air systems in the built environment. These systems are known as “regulated systems” and include:

- Water-cooling systems,
- Hot-water systems,
- Warm-water systems, and
- Air-handling systems.

The purpose of the Act and Regulation is to ensure owners and occupiers of buildings comply with minimum legislative responsibilities in order to prevent or prohibit the growth of microorganisms in these regulated systems that are liable to cause Legionnaires’ disease and other diseases.

The Regulation also requires the compliance of certain regulated systems with the following Australian Standards:

- AS/NZS 3666.1: 2002 Air-handling and water systems of buildings—Microbial control—Design, installation and commissioning,
- AS/NZS 3666.2: 2002 Air-handling and water systems of buildings—Microbial control—Operation and maintenance,
- AS/NZS 3666.3 2000 Air-handling and water systems of buildings—Microbial control—Performance-based maintenance of cooling water systems.

In 2004, the NSW Health Department published the second edition of the NSW Code of Practice for the Control of Legionnaires’ Disease (COP) to compliment the Public Health Act 1991 and the Public Health (Microbial Control) Regulation 2000. The COP assists, details and provides guidance to all those concerned with various aspects of microbial control in the various specific systems.

## **4.0 ALLOCATION OF RESOURCES**

4.1 Council must maintain a register of water-cooling systems in accordance with the Regulation. Resources must be allocated to this task to continually maintain and update the register in the required format. It is essential that Council will identify all new water-cooling systems through aerial photography and/or the development application process.

4.2 Council will audit all registered water-cooling systems once a year. The purpose of the audit is to monitor and ensure compliance with the legislation and that all required records are in place. Audits may involve a physical inspection, checking manuals and maintenance details, with possible sampling undertaken as part of the process.

**NOTE:** NSW Health is responsible for auditing the systems in public health care facilities.

4.3 In accordance with section 608(3) of the Local Government Act 1993, Councils are able to recover costs of inspecting water-cooling systems and warm-water systems. The fee for these inspections is adopted by Council each year and the fees are listed in Council’s Management Plan for that year (Health Surveyor Inspection Fee).

## **5.0 COUNCIL ACTIVITIES**

## 5.1 Register of Premises

Clause 15 of the Public Health (Microbial Control) Regulation 2000 requires a local council to keep a register of water-cooling systems and warm-water systems installed on *regulated premises* in its area.

Council maintains such a register in electronic form. (updated January 2009). The entries in the register must include:

- The type of system, or in the case of thermostatic mixing valves, a list of the numbers and types of systems;
- The address of the premises on which the system is installed;
- Name and residential/business address of the owner/occupier responsible for the system;
- If the operational area is occupied by a different entity, then their details are required;
- Telephone contact details including business and after hours; and
- Details of inspections carried out by the local authority.

5.2 All entries are to be arranged for rapid identification of the premises and occupier in the case of an outbreak. It is essential that contact with the occupier can be made outside normal business hours, particularly at weekends. The register is located on council's main server on H:\Environment\TrevorT\Legionnaires Disease.

## 5.3 Locating Unregistered Water-cooling Systems

A significant number of unregistered water-cooling systems have been implicated in clusters of Legionnaires' disease. Where unregistered water-cooling systems have been discovered it is usual to find that the building owner or occupier is unaware of their obligations under the Act and Regulation. That means that the water-cooling system is often not operated or maintained properly and is therefore a higher risk to public health.

Unregistered water-cooling systems may be located using a combination of the following mechanisms:

- Checking aerial photography of the central business district buildings, and commercial and industrial buildings; and
- Canvassing the owners/occupiers of all central business district buildings, and commercial and industrial buildings for which there is no registration of a water-cooling system.

## 5.4 Monitoring and Inspections

Council undertakes a monitoring program with the focus on ensuring existing and new installations comply with all relevant legislation, Codes of Practice and Australian standards. Every registered water-cooling system in the Leeton Shire Local Government Area may be audited annually. The audit may involve:

- Reviewing and collecting copies of on-site manuals and maintenance records,
- Confirming certification of the process designed to control microbial growth, and
- Taking samples and forwarding for analysis.

Note: Attached are forms for the request of Microbiological Analysis for a Legionella water sample, Water Cooling System Audit and installation tools.

#### *5.4.1 On-site Operational Manual and Maintenance Manuals*

A person installing a system is required to provide an operating manual for the system prior to handing over to an occupier for operation. The operating manual should depict the water treatment process and include:

- Physical details (drawings),
- Operating procedures, and
- Shut down procedures.

Manuals should be periodically reviewed by site owners/occupiers to incorporate amended legislation, standards, codes and industry practices.

Manuals shall be kept on site adjacent to the regulated systems or in a clearly identified location in proximity to the installation. A person in charge of the facility must be familiar with the location of these manuals.

#### *5.4.2 Maintenance Records*

Records must be kept whenever maintenance is performed. This includes the date, details of maintenance and the name of the employer. The person carrying out the work needs to review the documentation and to sign the record document.

Any person carrying out maintenance work on systems shall complete a maintenance report. A sample copy of a maintenance report is found in Appendix 3, NSW Code of Practice for the Control of Legionnaires' Disease, 2<sup>nd</sup> Edition, 2004.

Records shall be kept on site adjacent to the regulated systems or in a clearly identified location in proximity to the installation. A person in charge of the facility must be familiar with the location of these records.

#### *5.4.3 Process Designed to Control Microbial Growth*

In a water-cooling system, *Legionella* can only be controlled by the installation of a process designed to control microbial growth. It is essential that a competent person take responsibility for the disinfection system to certify that under normal circumstances it will control microbial growth. The certificate must be kept on-site.

### **5.5 Reporting Requirements**

NSW Health may request annual reports on the number of systems registered and related details as part of overall programs for ensuring prevention and preparedness for outbreaks.

#### *Notifying NSW Health of Failures or Potential Risks*

NSW Health has an overarching role in monitoring *Legionella* in the population through the Public Health Surveillance System. Council will notify the local Public Health Unit when multiple failures occur or when a water-cooling tower has been unregistered and have dubious maintenance records.

## **5.6 Warm-water Systems**

Owners/occupiers need to maintain warm-water systems in accordance with Clause 13 of Public Health (Microbial Control) Regulation 2000 and NSW Health Department Policy Directive PD2005\_344 “Water – Requirements for the Provision of Cold and Heated Water”.

## **5.7 Facilitating Improvement**

Council will introduce initiatives and strategies to provide a basis for improvement in procedures and preparedness to address *Legionella* control and outbreaks, which may include:

- Identifying systems which are not registered;
- Writing to local maintenance contractors and building owners and occupiers;
- Implementing an annual inspection program;
- Including relevant information on Council’s web page;
- Collecting data on the age and condition of water-cooling systems.

## **5.8 Education and Training of Council Staff**

Environmental Health Officers have a key role in auditing premises and assisting NSW Health in outbreak investigations during which local knowledge is essential. Council will support the attendance of relevant staff at training courses (in accordance with budget and resourcing). Section 13 of the *NSW Code of Practice for the Control of Legionnaires’ Disease, 2<sup>nd</sup> Ed, 2004* outlines courses which should be utilised for Council Environmental Health Officers.

## **6.0 Disease Management and Outbreak Responses**

### **6.1 Responsibility**

NSW Health and PHUs are responsible for coordinating case investigation and outbreak responses under relevant notifiable disease protocols. These protocols can be found at <http://www.health.nsw.gov.au/infect/diseases.html>.

### **6.2 Legionnaires’ Disease Reporting**

Laboratories and medical practitioners notify cases of Legionnaires’ disease to the Director-General of the NSW Department of Health through the local PHU.

### **6.3 Environmental Investigation**

Council will be requested to assist NSW Health or the local PHU with environmental investigation and other local responses in the event of a single case and an outbreak. Under Clause 14(1) of the *Public Health (Microbial Control) Regulation 2000* each local authority is to keep the necessary contact list as required by the Legionnaires’ Disease Emergency Management Plan. The contact list should nominate appropriate council personnel (and their business and after business hours contact details) who would be involved in the investigation of a cluster of Legionnaires’ disease cases. The contact list should also record details of each neighbouring council nominated contact officer to enable after hours contact should an outbreak extend into a neighbouring council area.