

OCCUPATIONAL HEALTH AND SAFETY UNIT

POLICY NOTE: OHSU P17 (2003)

WATER SAFETY MANAGEMENT POLICY



Introduction

This Policy Note reflects the Estates Department Code of Procedure on Water Safety Management and states the University's approach to the management of water systems for the prevention of legionnaires disease and in particular a group of water borne diseases known as legionellosis.

Legionnaires' disease is a potentially fatal pneumonia caused by legionella bacteria. Other similar but usually less serious conditions include Pontiac fever and Lachgoilhead fever.

This Policy Note is applicable to all University Buildings and for all water and cooling systems within these.

Outline of What the Law Requires

Under the Health and Safety at Work etc. Act 1974, the Management of Health and Safety at Work Regulations and the Control of Substances Hazardous to Health Regulations (COSHH) 2002 and the appropriate Approved Codes of Practice the University is required to consider the risks from legionella that may affect staff, students and others and to take reasonable precautions. Specifically the University is required to:

- Identify and assess sources of risk;
- Prepare a scheme (or course of action) for preventing or controlling the risk;
- Implement and manage the scheme, appointing a person to be managerially responsible;
- Keep records and check that what has been done is effective; and,
- If appropriate, notify the Local Authority that it has a Cooling Tower.

Policy Statement

The University recognizes its responsibility under the Health and Safety at Work etc. Act 1974 and other appropriate legislation, to manage its water systems in such a way that will ensure that employees, students, visitors or others are not placed at risk. The University will seek to meet the requirements of the HSC Approved Code of Practice and Guidance L8 'Legionnaires' Disease – The Control of Legionella Bacteria in Water Systems' and follow industry best practice in the design, installation, maintenance and management of its water systems. The University shall also undertake to comply with the requirements of Regulation 22 of the Workplace (Health, Safety and Welfare) Regulations and ensure that an adequate supply of wholesome drinking water is provided for all persons.

In order to achieve the above the University will:

- Identify and assess all sources of legionella risk by means of comprehensive risk assessments of all appropriate buildings and plant;
- Prepare a scheme for preventing or controlling the risk;
- Identify individuals and implement management system;
- Implement a safe system of working on water systems;
- Keep records of the precautions implemented;
- Undertake monitoring of the water management system; and
- Identify 'wholesome' drinking water points within all occupied buildings.

1. Responsibilities

Duty Holder	-	Vice Chancellor
Appointed Person	-	Director of Estates
Building Users	-	Head of Department ¹

The ultimate responsibility for health and safety within the University rests with the University Council and the Vice-Chancellor as the Chief Executive Officer and Duty Holder.

The Vice-Chancellor has nominated the Director of Estates to act as the Appointed Person with managerial responsibility for the management of water systems as they relate to the infrastructure of the University estate.

Heads of Departments are responsible for any equipment, plant or pipe work attached to the water system infrastructure.

N.B. 'Infrastructure' relates to fixed pipe work and other permanent components of the water system.

2. Water Safety Management Team

The Director of Estates, as the Appointed Person, will establish a Water Safety Management Team (WSMT) that will consist of:

- The Director of Estates
- The Deputy Director of Estates
- The Departmental Health and Safety Officer
- The designated Water Manager
- A representative from OHSU

¹ The term 'Department' as specified within this Code of Practice encompasses all University Schools, Departments, Units, Centres and Institutes as appropriate and as described within the University Health and Safety Policy.

A suitably qualified person or external consultant may advise the WSMT. Other members of staff will be co-opted onto the WSMT as required.

In accordance with the University's Crisis Alleviation Policy, the WSMT will form the operational arm of the Universities Crisis Management Team in relation to a legionella outbreak should this occur.

The WSMT will meet bi-annually and when required to review the effectiveness of the Water Safety Management Policy.

3. Organizational Arrangements

The Estates Department will retain the services of a suitably qualified person or consultant who will supply information and guidance as required.

The Director of Estates will make the necessary arrangements for all risk assessments and associated drawings, or proposed works to be reviewed particularly in relation to:

- Layout and arrangement of all calorifiers and pumps
- Layout and arrangements of all cisterns, humidifiers and cooling towers etc.
- All other water systems that may present a legionella hazard.
- Dead-legs and blind ends with lengths and diameters indicated
- Operation and checkpoints for cross referencing with operating instructions and temperature records

The Director of Estates will arrange for any deficiencies in the drawings to be rectified and where excessive dead ends or lack of controls are apparent will recommend that arrangements are in place for the action to be taken to rectify the problem.

Following the review of the drawings or schematics the Director of Estates will arrange for the physical inspection of the estate from the points that the water is received to the various water outlets. Including the following:

- Trace all water pipe work systems
- Measure the time taken to achieve recommended temperatures at hot and cold water outlets
- Checking layouts and arrangements of cisterns, calorifiers, pumps, humidifiers etc
- Measure water temperatures at all system calorifiers, humidifiers and cooling towers and all other strategic points to ensure and check compliance
- Identify any redundant or little used outlets together with the associated pipe work that could be removed
- Upon completion of these surveys, the responsible person will arrange for a scheme of risk control in order of priority

All spray and aerosol producing water plant, whether listed above or not, should be identified, assessed and the assessment recorded by the appropriate responsible person.

The assessment will be reviewed annually, or sooner if it is thought that the original assessment may no longer be valid. Risk assessments may need to be reviewed in the following circumstances:

- Changes to the water system or its use
- Changes to the use of the building in which the water system is installed
- New/revised information relating to risk or control measures
- The results of tests that indicate that control measures are no longer effective.

4. Day-to-Day Management

The arrangements for the day to day maintenance of the water systems within the University estate rest with the Senior Operational Manager for Water Safety, the Water Manager, as designated by the Director of Estates, who will receive such information, instruction, training and resources as is necessary to enable him/her to discharge this function competently and safely.

Any maintenance schemes established shall comply with requirements of L8 and The Control of Substances Hazardous to Health Regulations 2002 (COSHH).

The Water Manager will make arrangements as far as is reasonably practical:

- That all taps and outlets and associated pipe work, which are not used or are underused, are to be removed or isolated.
- That hot water temperature for calorifiers and hot water storage vessels are maintained at a temperature at or above 60 degrees Centigrade.
- To ensure that all pipe work carrying blended water temperatures of between 25 and 43 degrees centigrade is restricted and is as short as possible.
- To reduce the length of dead legs or spurs from the main hot water circulatory system to minimum.
- To maintain stringent cleanliness of water systems, ventilation and other systems.
- Use of the correct water treatment regime in wet cooling towers.
- To introduce the correct level of maintenance to ensure correct and safe operation and compliance with statutory regulations.
- That appropriate records of maintenance operations are compiled and kept for the life of the building.
- That under normal use conditions water within the system should be replenished every 24 hours. Where there is a possibility that water systems or significant parts of systems will remain unused for significantly longer periods, arrangements will be made to ensure water safety.
- To keep all water storage systems clean and sealed from extraneous matter and maintain temperatures below 20 degrees centigrade for cold-water services.
- To consider the introduction of continuous dosing of the incoming cold-water services using a recognized chemical solution or other approved means that would assist in reducing the risk from legionella and other water borne mechanisms if adequate control cannot be achieved by temperature.

5. Directly Employed Maintenance Staff

Only suitably qualified and experienced staff who have received such information, instruction, training and resources as is necessary to enable them to discharge this function competently and safely, will undertake work on the water systems and associated equipment within the estate. All work will be undertaken in such a way that the safety of the water system will not be compromised. Care will be taken that only approved materials and components are used.

6. Contractors

All contractors employed by the University are responsible for ensuring that they and any sub-contractors reporting to them carry out their activities in such a way that complies with the University's Water Safety Management Policy. This includes complying with any instruction written or otherwise from an officer of the Estates Department. Preference will normally be given to contractors registered with a Code of Conduction Association (CCA).

7. New Build and Alterations

Estates staff and any consultants appointed by them shall be responsible for the effective design and management of all capital schemes including appropriate and comprehensive commissioning which is to be agreed with the Director of Estates during the design stage. Full drawings and technical data relating to the water systems will be provided on the completion of the work. Only materials and fittings approved by the appropriate National body will be used in any University project.

New buildings will have an adequate number of drinking water outlets that are suitably labelled and maintained.

8. Departmental Responsibilities

Heads of all Academic and Support Departments are responsible for the safety of each item of Departmental equipment etc. that is attached to a building's water system.

The Head of Department (the Building User) must ensure that an appropriate risk assessment is undertaken on each item of equipment, which requires a water supply, to ensure that there is no water safety risk or breach of this Policy Note.

Attention is also drawn to local water by-laws that stipulate that there should be no risk of back siphoning of water from equipment or hoses directly connected to the main water supply. This should be achieved through use of approved double check valves or non-return valves.

Specific advice on water safety management issues can be obtained from the Water Manager.

9. Action to be taken in response to a water sample giving a positive legionella test result or a case of legionella is suspected involving the University

- All necessary action will be taken to minimise further contact with the suspected source.
- The Appointed Person will inform the:
 - University Crisis management Team (CMT)
 - The Water Management Team
 - The qualified person or appointed consultant
- Action will be taken to isolate, disinfect or pasteurize the relevant water system as necessary.
- A meeting of the WSMT will be convened to consider the necessary action and make recommendations to the CMT. Any proposed action must, where appropriate, first be agreed with the appointed consultant.
- The Appointed Person, Director of Estates, will arrange for the implementation and monitoring of remedial action. This will include taking further samples and further actions as required.
- Where a suspected case of infection is involved the medical authorities will receive every assistance, including provision of samples and any test results.
- Following any suspected outbreak or cause for concern the WSMT will convene to review the management systems in the light of the incident and make the appropriate recommendations for improvement.

10. HSE Reporting

Where a case of Legionnaires disease is confirmed the OHSU will inform the Health and Safety Executive.

11. Wholesome Drinking Water

In accordance with good practice and in accordance with the Workplace (Health, Safety and Welfare) Regulations the University, through the Estates Departments, shall ensure that all wholesome drinking water outlets are identified and are suitably labelled, within all occupied University buildings.