



# *Backflow Prevention Management Plan*

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# 1. Purpose

This document outlines roles and responsibilities for Coliban Water, property owners and Coliban Water contractors as they relate to the backflow prevention requirements of the following documents:

- Drinking Water Quality Risk Management Plan
- Coliban Waters Backflow Prevention Containment Policy
- AS/NZS 3500.1
- Water Act 1989

## 2. Background

### 2.1. What is Backflow?

The undesirable reverse flow of water from a potentially polluted or contaminated source to the potable water supply system. Backflow may occur under backpressure, back siphonage or a combination of both.

Backflow can result in a public health risk if it allows pollutants or contaminants such as chemicals to enter the drinking water supply.

## 3. Definition of Terms

**Backflow:** the unplanned reverse flow of water or mixtures of water and contaminants into the reticulated water supply system.

**Containment protection:** the installation of a backflow prevention containment device on the reticulated water supply system at the property boundary, to prevent backflow from within the property entering the system.

**Cross connection:** any connection or arrangements between the system connected to the water main or any fixture that may enable non-drinking water or other contamination to enter the system.

**Double check valve:** a medium hazard testable device in accordance with AS 2845 Part 1.

**Drinking water:** water that is suitable for human consumption, food preparation, utensil washing and oral hygiene (see AS/NZS 4020). Compliance with the Australian Drinking Water Guidelines 2004 (and as amended) is required.

**Dual check valve:** low hazard non-testable device in accordance with AS 2845 Part 1.

**Fire service:** services comprising water pipes, fire hydrants, fire hose reels, fittings and including water storage or pumping facilities, which are installed solely for firefighting and extinguishing purposes in and around the building or property.

**Grey/black water recycling system:** a system that provides a localised water treatment system owned and operated by Coliban Water and/or private operator.

**High Hazard Rating:** any condition, device, or practice, which in connection with the system has the potential to cause death.

**Individual protection:** installing a backflow prevention device at the point where the water pipes connect to a fixture or appliance.

**Low Hazard Rating:** any condition, device, or practice, which in connection with the system, is a nuisance but does not endanger health or cause injury.

**Medium Hazard Rating:** any condition, device, or practice, which in connection with the system could endanger health

**Mixed development:** a property with both commercial and residential classifications on-site.

**New connections:** any new or existing property, undergoing construction or redevelopment that must submit a development application.

**Reduced Pressure Zone Device:** a high hazard testable device in accordance with AS 2845 Part 1.

**Registered Air Gap:** an unobstructed vertical distance through the free atmosphere between the lowest opening of a water service pipe (or fixed outlet) supplying water to a fixture or receptacle and the highest possible water level of that fixture or receptacle.

**Registered break tank:** a tank system specifically designed for backflow prevention registered by, or on behalf of Coliban Water, for inspection and maintenance.

**Reticulated water supply system:** the supply system into which Coliban Water delivers drinking and/or non-drinking water.

**Suitably qualified person (for backflow testing):** a plumber registered and/or licensed in backflow according to the Victorian Building Authority (VBA).

**Zone protection:** installing a backflow prevention device at the connection point of specified sections of a plumbing system within a building or facility.

## 4. Roles and Responsibilities.

### 4.1. Property Owners

The property owner is responsible for:

- The purchase and installation costs of a backflow prevention containment device appropriate to the hazard.
- Annual testing of medium or high risk backflow prevention devices
- providing copies of backflow prevention test certificates to CIS

### 4.2. Casey Inspection Services (CIS Pty Ltd)

CIS provide the following service(s) on behalf of Coliban Water:

- Ongoing inspection and audit program of customer meter connections to determine where a backflow prevention device is required
- Collection of backflow test certificates and maintenance of backflow prevention device register
- Issue written notice to customers to repair, maintain, test, replace or install a backflow prevention device.

See Appendix 1 for process flow diagram.

### 4.3. Coliban Water

Coliban Waters must address the risk of backflow in its Drinking Water Quality Risk Management plan (DWQRMP) and are required to:

- Maintain the *Backflow Prevention Containment policy*

- Maintain a register of testable backflow prevention devices within the Coliban Region.
- Amend / Change of use connections including removal from register
- Advise appropriate backflow prevention device(s) during new property connection applications via the Land Development internal referral process.
- Maintain an annual test program for all testable backflow prevention devices at Coliban Water assets.
- Provide copies of test certificates for Coliban Water assets to CIS
- Coliban Water are responsible for enforcement if the property owner fails to comply with a notice.

#### 4.4. Veolia/ETE sites

External contract partners that own and operate assets on behalf of Coliban Water under contract, must maintain a list of testable devices in an asset management system and ensure testing is completed on an annual basis with results provided to Coliban Water.

*See Appendix 2 for process flow diagram.*

## 5. Legislation and Standards

The following are the principal Acts, Regulations and Standards that are relevant to backflow prevention.

#### **The Water Act 1989 (as amended)**

It defines water entitlements and establishes the mechanisms for managing Victoria's water resources. Section 8 provides for an individual's rights and Section 9 sets out the rights of water corporations.

#### **Water Industry Act 1994 (as amended)**

This requires Coliban Water to provide, manage, operate and protect the water supply system. It allows Coliban Water to outline conditions with which all property owners must comply with when connecting to the water supply.

#### **Water Industry Regulations 2006 (as amended)**

Section 11 and 17 outlines the property owner's responsibility for the installation and ongoing maintenance of backflow prevention devices.

#### **Safe Drinking Water Act 2003 (as amended)**

The purpose of this Act is to make provision for the supply of safe drinking water. This includes making specific directives to water supply authorities in managing water quality.

#### **AS/NZS 2845 Water Supply – Backflow Prevention Devices (as amended)**

This Standard specifies requirements for the design, performance and testing of backflow prevention devices used for the protection of the water supply.

#### **AS/NZS 3500 Part 1 Water Services and Part 5 Cold Water Plumbing (as amended) Part 1 (Section 4)**

This section specifies the requirements and methods for the prevention of potential contamination of drinking water within the water service and the water main and provides for the selection and installation of backflow prevention devices.

## Plumbing Code of Australia 2011

This legislation empowers the regulation of certain aspects of plumbing and drainage installations, and contains the administrative provisions necessary to give effect to the legislation.

## 6. Compliance

The property owner is responsible for installing, maintaining and arranging testing of backflow prevention devices.

Only a suitably qualified plumber can install, commission, maintain and test backflow prevention devices.

For full compliance requirements refer to Coliban Water's *Backflow Prevention Containment Policy*.

## 7. Non-Compliance

In the event of a property owner refusing to rectify a potential backflow hazard or cross-connection hazard Coliban Water has the authority to disconnect the reticulated water supply system to the relevant property in order to protect the system and public health as per Section 65 of the Water Industry Act 1994\* (and as amended).

For examples of where the system may be disconnected refer to the *Backflow Prevention Containment Policy*.

