



<b>Policy Title</b>	DRAFT Backflow Prevention Policy
<b>Policy Category</b>	Public
<b>Number &amp; Version</b>	SVC-ENG-PO-112-01
<b>Policy Owner</b>	Water & Wastewater Engineer
<b>Approval by</b>	
<b>Effective date</b>	
<b>Date for review</b>	

## 1. STRATEGIC PURPOSE

This policy's purpose is to protect the quality of Snowy Valleys Council's (Council) potable water supply, by identifying, managing and controlling hazards related to the risk of contamination from backflow, back siphonage and cross connections. Such contamination can affect not only the potable water supply, but also impact public health.

## 2. POLICY STATEMENT

The installation of an appropriate backflow prevention device is required for each new and existing connection to ensure that Council's water supply network is protected against the backflow of contaminants into the reticulation network.

Council as the supplier of drinking water to the public must ensure that it meets its obligations under the Australian Drinking Water Guidelines and Council's Drinking Water Management System (DWMS).

To satisfy the requirements of the Plumbing Code of Australia and Australian Standard AS/NZS 3500 Part 1, Council is operating a system of compliance to protect the quality and integrity of its water supply systems.

The property owner or customer is responsible for their connection complying with the Backflow Prevention Policy.

### 3. DEFINITIONS

Term	Definition
<b>Accredited backflow prevention plumber</b>	A licensed plumber who has undertaken accredited backflow training from a registered training organisation.
<b>AS/NZS 2845.1</b>	Australian/New Zealand Standard for Water Supply- Backflow prevention devices-materials, design and performance requirements.
<b>AS/NZS 3500.1</b>	Australian/New Zealand Standard for Plumbing and Drainage: Part 1: Water Services.
<b>Backflow</b>	The unintended reversal of flow in a water pipeline whereby water that has already passed beyond the meter assembly into the customer's pipeline system returns to the Council's potable water supply.
<b>Back pressure</b>	The difference between the pressure within any water service and a higher pressure within any vessel or pipework to which it is connected.
<b>Backsiphonage</b>	Occurs when the water supply pressure falls below atmospheric pressure.
<b>Backflow prevention containment device</b>	A device to prevent the reverse flow of water from a potentially polluted source, into the potable water supply system.
<b>Containment protection</b>	The installation of a backflow prevention containment device on the water service(s) at the property boundary, to prevent backflow from within the property entering the potable water supply system.
<b>Contaminant</b>	Any solid, liquid or gas with potential to enter or pollute the potable water supply.
<b>Cross connection</b>	Any connection or arrangements between the drinking water supply system, connected to the water main or any fixture that may enable non-potable water or other contamination to enter the potable water supply system.
<b>Double check valve (testable and non-testable)</b>	A device to prevent backflow caused by backpressure, which has two independently operating force loaded non-return valves. A testable double check valve incorporates specific test points for in-service testing.
<b>Individual protection</b>	Installing a backflow prevention device at the point where the water pipes connect to a fixture or appliance.
<b>Licensed plumber</b>	A plumber with a license issued by the NSW Office of Fair Trading.
<b>New properties</b>	Any new or existing property, undergoing construction or redevelopment that must submit a development application.
<b>Plumbing Code of Australia</b>	Technical Standard for all plumbing and drainage work in NSW.
<b>Potable Water</b>	Water that is fit for human consumption, food preparation, utensil washing and oral hygiene (see AS/NZS 4020).
<b>Reduced pressure zone device</b>	A device to prevent backflow caused by back siphonage or back pressure in a water reticulation system that incorporates two independently operating force loaded non-return valves. These

	automatically drain to waste whenever the pressure in the system (between the upstream and downstream non-return valves) drops to less than 14 kPa below the pressure at the inlet to the upstream non-return valve.
<b>Registered air gap</b>	A device or system installed for backflow prevention registered by, or on behalf of, a regulatory authority for inspection and maintenance. Air gap for a water supply system is specifically defined as the 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.
<b>Registered break tank</b>	A tank system specifically designed for backflow prevention registered by, or on behalf of a regulatory authority, for inspection and maintenance.
<b>Testable device</b>	Any backflow prevention device that is provided with test taps for the purpose of testing its operation, and a registered break tank, or a registered air gap.
<b>Water supplies</b>	Drinking and/or recycled water.
<b>Zone protection</b>	Installing a backflow prevention device at the connection point of specified sections of a plumbing system within a building or facility.

#### 4. POLICY REQUIRMENTS

All water supply systems shall be designed, installed, and maintained to prevent contaminants from being introduced into Council's potable water supply system. No device or system that may cause contamination of Council's water supply shall be connected directly or indirectly to any part of a water service without appropriate backflow prevention or cross-connection control suitable for the degree of hazard.

##### 4.1 Backflow Prevention Devices

All properties connected to the Council potable water supply network require a backflow prevention device installed in accordance with the provisions of the Australian and New Zealand Standard for Plumbing and Drainage Part 1: Water Services (AS/NZS 3500.1), the Plumbing Code of Australia and Council's connection requirements. Backflow prevention devices materials, design and performance aspects shall comply with AS/NZS 2845.1.

The specific device required will depend on the hazard rating of the property. An accredited backflow prevention licensed plumber will determine the required type of backflow prevention device to be installed using the hazard rating process described in AS/NZS 3500.1.

Required backflow prevention will be determined by identifying the individual hazard(s) within the property. Working upstream from each hazard, the water shall be regarded as non-potable until a backflow prevention device, suitable to the degree of hazard is provided. Refer to AS/NZS 3500.1 for suitability of backflow prevention devices.

##### 4.2 Hazard Ratings

Backflow prevention devices are rated using three cross-connection degrees of hazard, defined in AS/NZS 3500.1 Plumbing and Drainage, Part 1:

- **High hazard rating** - Any condition, device, or practice, which in connection with the potable water supply system, has the potential to cause death.

- **Medium hazard rating** - Any condition, device, or practice, which in connection with the potable water supply system, could endanger health.
- **Low hazard rating** - Any condition, device, or practice, which in connection with the potable water supply system, is a nuisance but does not endanger health or cause injury.

In the absence of any site-specific information, Council will assign a hazard rating to a property based on Council's assessment of the primary activities being undertaken onsite.

Council may update the rating from time to time. If the property owner has more site-specific information and requests a review of the hazard rating then Council will review the hazard and may determine that a different hazard rating is more appropriate and amend its records accordingly.

#### 4.3 General Installation Requirements

- Properties with a low hazard rating shall be fitted with a non-testable double check valve contained within the Council water meter for 20 and 25mm connections.
- The property owner is responsible for the installation of the appropriate backflow prevention devices, including containment protection, on properties that have a high or medium hazard rating.
- A licensed plumber must install and certify all backflow prevention devices, including registered break tanks and registered air gaps to comply with AS/NZS 3500.1.
- A licensed plumber with backflow prevention accreditation is required for inspection, commissioning, maintenance and testing of testable devices.
- Council may refuse water supply (under the *Local Government Act 1993*) to new and existing water service connections that do not comply with Council's Backflow Prevention Policy.
- Separate water control valves and provision for water metering are to be provided to each tenement or sole occupancy unit wherever practical.
- Metered standpipes must include a testable double check valve.
- Backflow prevention devices shall not be interfered with, covered up or bypassed.

#### 4.4 Testable Devices- Maintenance Certification and Testing

The property owner is responsible for the ongoing maintenance, certification, and annual testing of backflow prevention devices by an accredited backflow prevention licensed plumber on properties with a high or medium hazard rating.

Council will notify the property owner of the requirement for annual inspection and testing. Certification of the satisfactory operation of the backflow device is to be submitted to Council within 30 days of receipt of notification.

It is the responsibility of the accredited backflow prevention licensed plumber to submit the annual satisfactory test results to Council within 10 working days of testing the backflow prevention device.

If the property owner fails in their responsibility to maintain, certify and test the backflow device, Council may issue a reminder notice, test and certify the device, or disconnect the water service if the property presents an unacceptable risk to the water supply. Fees apply if Council has to implement any of the above.

#### 4.5 Records

Council will keep records of all properties backflow hazard rating. Council may ask property owners to certify their hazard rating periodically. Council may require that this certification be carried out from time to time by an accredited backflow prevention licensed plumber.

Council will maintain a register of all backflow installations, certification and testing.

#### 5. ASSOCIATED LEGISLATION

- NSW Local Government Act 1993
- NSW Local Government (General) Regulation 2005
- NSW Water Management Act 2000 (Chapter 2, Section 23)
- NSW Public Health Act 2010
- Australian Drinking Water Guidelines 2011
- Australian Standard AS/NZS 3500.1 Plumbing and Drainage
- Australian Standard AS/NZS 2845.1 Water Supply
- Plumbing Code of Australia
- NSW Plumbing and Drainage Act 2011

#### 6. ASSOCIATED COUNCIL DOCUMENTS

- Snowy Valleys Council Drinking Water Management System (DWMS)
- Snowy Valleys Council Incident and Emergency Response Plan for DWMS.

Date	Action	Name	Policy Number	Resolution Date	Resolution Number
EG	Supersede	Backflow Prevention Policy (Former Tumut Shire Council)	Reg.05		
15/04/2021		Backflow Prevention Policy	SVC-ENG-PO-112-01		