



NAMBUCCA SHIRE COUNCIL

BACKFLOW PREVENTION CONTAINMENT POLICY NO: ES 12

Our Vision

Nambucca Valley ~ Living at its best

Our Mission Statement

‘The Nambucca Valley will value and protect its natural environment, maintain its assets and infrastructure and develop opportunities for its people.’

History

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1 Policy statement

Nambucca Shire Council, being the local Water Authority recognises that the potential exists for its potable water supply to be contaminated by hazards that it may be exposed to.

Council accepts that it has a duty of care to:

- maintain the integrity and safety of the water supply,
- protect public health
- reduce the risk of contamination of the water supply through any potential hazard including backflow and cross connection.
- contain real or potential hazards from the activities of consumers within the boundaries of the consumers premises.

This policy permits Council to implement procedures to:

- identify existing and potential hazards
- compile a register of backflow prevention devices and a record of their ongoing inspection and maintenance
- enforce landowners to install and maintain appropriate backflow prevention devices as required.
- recoup costs incurred in ensuring that properties are compliant with the relevant codes and practices in relation to backflow prevention and cross connection

Accordingly all water services connected to Nambucca Shire Council's water supplies must meet the requirements of the *NSW Code of Practice for plumbing and drainage* and *Australian/New Zealand Standard for plumbing and drainage Part 1: Water services (AS/NZS 3500.1)* so as to protect Nambucca Shire Council's water supplies.

All customers with a connection to the water supply must install a backflow prevention containment device appropriate to the property's hazard rating. Property owners that have a high or medium hazard rated property must install a testable backflow prevention containment device at the property boundary for containment protection, appropriate to the property's hazard rating. They must have the backflow prevention containment device tested annually.

In addition all new properties identified as having a low hazard rating must install a non-testable device, as a minimum. Where the water service is greater than 25mm, the owner must pay for the installation.

2 Scope

The Backflow Prevention Containment Policy applies to all new and existing properties connected to Nambucca Shire Council's water supply. There are no local policy exemptions from the requirement to install and maintain backflow prevention devices.

3 Objectives

The objectives of the policy are:

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- to protect the quality of Nambucca Shire Council's potable water supply by minimising the risk of backflow contamination from connections to the supply system.
- to specify when testable backflow prevention containment devices are required to protect the water supply from contamination from high or medium hazards flowing back through the property water service, metered standpipes, separate fire service or hydrants.
- to set out Nambucca Shire Council's requirements to install and test backflow prevention containment devices on properties rated as high and medium hazards.
- to set out Nambucca Shire Council's requirements to install non-testable backflow prevention containment devices on properties rated as a low hazard.
- to identify backflow prevention containment requirements for customers with multiple water supplies including both drinking water and non-drinking water supplies.
- to manage the procedure for new service connections, applications and plumbing permits to enable compliance by plumbers and landowners.
- to ensure compliance and annual testing of backflow prevention devices in accordance with relevant plumbing codes and standards.

4 Legislative context

The policy is based on the requirement for the Nambucca Shire Council to Comply with the Department of Water and Energy Best Practice Management Guidelines for Water Supply and Sewerage, the *NSW Code of Practice for Plumbing and Drainage* and *Australian/New Zealand Standard 3500.1 (AS/NZS 3500.1)*.

Council's authority to enforce the policy is derived through the NSW Local Government Act 1993, the Local Government (Water Service) Regulations 1999 and Local Government (Approvals) Regulations 1999.

5 Definitions

TERM	DEFINITION
Accredited backflow prevention plumber	A licensed plumber who has completed a TAFE NSW backflow prevention course
AS/NZS 2845	<i>Australian/New Zealand Standard for water supply - Backflow prevention devices – materials, design and performance requirements</i>
AS/NZS 3500.1	<i>Australian/New Zealand Standard for plumbing and drainage Part 1: Water services</i>
Backflow prevention containment device (AS/NZS 3500.1)	A device to prevent the reverse flow of water from a potentially polluted source, into the drinking water supply system
Containment protection	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 main water supply
Cross connection	Any connection or arrangements between the drinking water supply system, connected to the water main or any fixture that may enable non-drinking water or other contamination to enter the drinking water supply system
Customer	The property owner
Decentralised waste water treatment system	A system that provides a privately owned non-drinking water supply
Double check valve (AS/NZS 3500.1)	A device to prevent backflow caused by backpressure, which has two independently operating force loaded non-return valves and incorporates specific test points for in-service testing
High hazard rating (AS/NZS 3500.1)	Any condition, device, or practice, which in connection with the water supply system, has the potential to cause death
Medium hazard rating (AS/NZS 3500.1)	Any condition, device, or practice, which in connection with the water supply system, could endanger health

Low hazard rating (AS/NZS 3500.1)	Any condition, device, or practice, which in connection with the water supply system, is a nuisance but does not endanger health or cause injury
Individual protection	Installing a backflow prevention device at the point where the water pipes connect to a fixture or appliance
Licensed plumber	A plumber with a license issued by the NSW Office of Fair Trading
Mixed development	A property with both commercial and residential classifications on-site
New properties	Any new or existing property, undergoing construction or redevelopment that must submit a development application
Reduced pressure zone device (AS/NZS 3500.1)	A device to prevent backflow caused by back siphonage or backpressure 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
Registered air gap (AS/NZS 3500.1)	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
Registered break tank (AS/NZS 3500.1)	A tank system specifically designed for backflow prevention registered by, or on behalf of a regulatory authority, for inspection and maintenance
Water supplies	Drinking and/or recycled water
Zone protection	Installing a backflow prevention device at the connection point of specified sections of a plumbing system within a building or facility

6 Installation requirements

- A backflow prevention containment device must be installed on all properties as defined in AS/NZS 3500.1.
- All backflow prevention containment devices must be installed following the requirements of AS/NZS 3500.1 and *The NSW Code of Practice Plumbing and Drainage*.

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- A testable backflow prevention containment device must be installed on the water service of properties identified as a medium or high hazard.
 - Where hazards are unknown for a commercial, industrial or mixed development, the hazard rating will default to high, requiring the owner to install a testable backflow prevention device.
 - Owners of properties identified as low hazard must install a non-testable backflow prevention containment device. For properties served by a water meter larger than 25 mm, a non testable dual check valve must be installed at the owner's expense.

Note: Nambucca Shire Council proactively addresses potential low hazard properties by installing either a 20 or 25 mm water meter that incorporates an integrated dual check valve as part of its Water Meter Renewals Program and for new connections and residents with this type of water service are not required to take any action.

- The type of backflow prevention containment device installed is based on the on-site process hazard rating and or the type of water supply present.
- Where multiple processes occur on a site, the hazard rating will be based on the process with the highest rating, eg if two medium risk and one high risk processes occur on-site the rating for the site will be high.
- Properties that have both drinking and non-drinking water supplies must have an appropriate level of backflow prevention containment installed. Drinking and non-drinking services must not be interconnected. The device installed must be the same on both the drinking and non-drinking services. These properties include mixed developments and areas serviced by a decentralised wastewater treatment system.
- Owners of properties with high hazard ratings must install a registered break tank, reduced pressure zone device or registered air gap.
- Owners of properties with a medium hazard rating must install a testable double check valve assembly as a minimum.
- Metered standpipes connected to Nambucca Shire Council's water supplies must have a testable double check valve incorporated to the design of the standpipe.
- Owners of properties with separate hydrant and sprinkler fire services must install a testable double check detector assembly. The device must be installed close to where the water service crosses the property boundary, upstream of any booster assembly on, or off-take from, the fire service.
- Owners of properties with window or wall drencher sprinkler systems must install a low hazard non-testable device.
- All property owners required to fit a backflow prevention containment device to the water supply must do so on the outlet side of the master water meter(s) supplying the property. In cases where there is no master water meter(s), the containment device shall be installed on the water supply where it enters the property boundary. No connection may bypass the backflow prevention containment device

7 Operating principles

Council

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- Nambucca Shire Council will maintain a register of installed testable containment devices and annual test reports. They will audit a sample of installations to ensure ongoing compliance with AS/NZS 3500.1.
 - □ If Nambucca Shire Council issues a notice that a backflow prevention containment device does not comply with AS/NZS 3500.1 the property owner must repair, maintain, test, replace or install the backflow prevention containment device (as specified in the notice), within the timeframe given.
 - Nambucca Shire Council as an authority identified in the *NSW Code of Practice for Plumbing and Drainage* reserves the right to take action against the licensed plumber for any installation that does not meet AS/NZS 3500.1.

Property Owner

- The property owner is responsible for their property complying with the Backflow Prevention Containment Policy.
- The property owner must ensure all backflow prevention containment devices installed comply with the Backflow Prevention Containment Policy. This includes, but is not limited to, installation, maintenance and annual testing.
- If the property owner fails to install, repair, maintain, replace or test a backflow prevention containment device (as required by a notice issued by Nambucca Shire Council), Nambucca Shire Council may disconnect a non residential property, or restrict a residential property or mixed development from the water supply system until the property owner has complied with the notice. This is to prevent the property contaminating the water supply.
- If the process at the property has changed and the hazard rating is reduced, the property owner must have an accredited backflow prevention plumber certify the change in hazard rating and inform Nambucca Shire Council. Nambucca Shire Council may conduct a site audit to verify the new hazard rating.

8 Compliance and reporting requirements

Council

- Council shall determine the hazard rating of the property to which the backflow prevention device is to be fitted.
- Existing, non-certified backflow prevention installations will be audited by Council for compliance with the current requirements of AS/NZS 3500.1 and *The NSW Code of Practice Plumbing and Drainage* Plumbing. Audits will be completed with the property owner were possible and written notice of any works required for compliance will be forwarded to the property owner.

Plumber

- A licensed plumber shall submit a Section 68 application to Council for the installation, removal or modification of any backflow prevention device and pay all fees and charges applicable. Council approval shall be obtained prior to commencing work.
- A licensed plumber must install all backflow prevention containment devices. Only a licensed plumber with backflow prevention accreditation may commission, and test these devices.
- A licensed plumber must install and certify registered break tanks, and registered air gaps.
- A licensed plumber must submit the Certificate of Compliance for the containment device installation for medium and high hazard rated properties. They must submit the Inspection

Test and Maintenance Report to Nambucca Shire Council within two days of completing the work.

- For low hazard properties, Nambucca Shire Council does not require the plumber to register the Certificate of Compliance.

Property Owner

- Where existing, non-certified backflow prevention devices are audited by Council it is the property owner's responsibility to ensure that all works required for the installation to be compliant are completed within 2 months of Council providing written notice of the required works.
- The property owner is responsible for installing, maintaining and the annual testing (where applicable) of backflow prevention containment devices within their property in accordance with AS/NZS 3500.1.

Note: The property owner is also responsible for providing zone and individual backflow protection from hazards within their property as specified in AS/NZS 3500.1.

- The property owner is responsible for ensuring that a licensed plumber completes all works and that the plumber submits all Test and maintenance Reports to Council within the two days of completing the work