

Rous County Council is legally required to ensure a high standard of its potable water supply and boundary containment devices are required to protect the supply systems under its control.

Backflow is the unintended reversal of water flow from a property back into Rous County Council's (Council) main. This may occur when there is a sudden reduction in pressure in the water distribution system, e.g. in cases of a pipeline break or the fire brigade pumping water from the main to fight a fire.

In industrial and commercial premises, this water may have been contaminated with chemicals used on the property, or on rural properties, water from a cattle trough could be siphoned back into the system.

Backflow can represent a serious health risk to Council's customers.

The installation of appropriate devices on the water connection to properties

The backflow prevention device to be installed is determined by the activities carried out on site and the risk those activities pose. The devices are installed in addition to the water meter assembly. Under the Australian Standard AS3500 and Council's Backflow Prevention and Cross-connection Control policy, the property owner is to ensure that a backflow device is installed and is in working order. Under the policy, the property owner is required to forward documentation to Council every twelve months to establish this.

If you have any questions, please contact Council's Backflow Prevention Officer, David Schneider on (02) 6623 3800 or email: council@rous.nsw.gov.au

Frequently Asked Questions

What is backflow?

Backflow is 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 potentially contaminated to Council's water supply system.

This can happen through back siphonage, back pressure, or a combination of both (please see definitions).

Why is it a concern for Council?

It is a concern for Council because this water may be contaminated with chemicals or whatever is mixed with the water on the property. If the water enters the regional water supply, it could be used by another customer causing health issues to the customer and liability issues for Council and the customer that was the source of the contamination.



Site cross-connection

Hose connected to a tap and outlet submerged in pit or tank has the potential to contaminate the drinking water supply if there is a drop in pressure in the water main.

Do I need to install a backflow prevention device?

Council conducted a survey of water use by its consumers to determine if any water use by property owners had the potential to contaminate the regional water supply, should a backflow event occur.

Council has now determined if a device is required at your property and will advise you in writing. All properties with a water connection and a medium or high hazard rating must have a backflow prevention device installed in accordance with the Australian Standard AS3500 and AS2845.

If a property owner did not respond to the survey inspection notice, the hazard rating for the property defaulted automatically to high.

Why have I been singled out?

No property has or is singled out. This phase of the program requires all water service connections with high or medium hazards to install a suitable backflow prevention device.

Some properties may not yet have been accessed, but Council will survey all properties.

I am an industrial / commercial customer, would I have a backflow device now on my water service?

If water connection was installed since the mid-1990s it is likely you will already have a device fitted. However, the device would not be registered with Council and likely has not been tested annually. If you already have a device installed it will need to be tested by a licensed plumber with backflow prevention accreditation and the results sent to Council.

I understand there are several types of backflow prevention devices, how do I know which is the best one for me?

The usages undertaken on the property determines the hazard rating, which in turn determines the backflow prevention device. Council will use the determined hazard assessment unless the property owner supplies more detail-specific information that would lead to assignment of a different hazard.

Council requires that all high hazard rated properties have a reduced pressure zoned (RPZ) device installed immediately downstream of the meter and that all medium rated properties have a testable double-check valve (DCV) installed immediately downstream of the meter (containment protection).

What do these devices look like?

The type of device is dependent upon your hazard rating. Types of backflow prevention devices include:

Device	Hazard rating
Reduced pressure zone device (RPZ)	High
Registered break tank/air gap	High
Testable double-check valve	Medium
Testable double-check detector assembly	Medium



32mm water meter and RPZ device.



20mm water meter and double-check valve.

Are backflow devices installed on fire services as well as water services?

Yes, the risk of contamination depends on the circumstances within the customer's property, so they would be installed on all water services to the property, whether a fire service or a water service.

I have a testable backflow device, what am I required to do?

If you already have a backflow prevention device installed, it will need to be registered with Council. The Australian Standard requires property owners to test these devices every twelve months. Council policy requires you to use a licensed plumber, who has completed additional training in backflow prevention, to undertake the test and to forward the results to Council.

What are the uses or potential uses that require a backflow prevention device to be installed?

The determination that a property needs a backflow prevention device is based on the current or potential usages of the water supplied to the property.

Potential sources of contamination:

Air conditioning towers	Irrigation areas	Sullage pits / process tanks
Fire hose reels	Ornamental ponds	Dockside facilities / jetties
Animal drinking troughs	Vehicle maintenance pits	Swimming pools / spas
Bidets / Bain-maries	Spray tanks / containers	Dishwasher / glass washers
Vehicle washing bays	Chemical injection areas	Boilers / steam pipes
Alternative water supplies	Rainwater tanks	

Examples of properties required to comply with backflow prevention:

Motels and unit complexes	Industrial installations
Catering and allied industries	Schools, day care centres and kindergartens
Hotels	Abattoirs
Vehicle repair and workshops	Pest control and water carrying vehicles
Shops and restaurants	Chemical (storage) plants
Caravan parks	Zoos and local attractions
Car and plant washing facilities	Botanic gardens
Dry cleaners and laundries	Farms
Hospitals and funeral parlours	Properties with livestock
Marinas, shop yards and boat building properties	Properties used for agricultural and horticultural purposes
Club houses for sports, etc.	Medical and dental surgeries, including veterinary surgeries
Premises with alternative water supply where inspection is restricted with reticulated and disinfected reclaimed water	



Bottom feed cattle troughs are a major concern for local water authorities.

Why do I have to tell Council of changes in my business activity?

- Changes in property / business activity may affect your hazard rating and that in turn may affect the required backflow prevention device needed on your property.
- If the change in property / business activity increases the hazard, then the existing device may need to be replaced with one that gives a higher level of protection.
- If the change in property / business activity decreases the hazard, then the existing device can continue in service. When it reaches the end of its life, the property owner will need to decide whether to replace it with a similar device, or if the reduction in hazard is likely to be permanent, to replace it with a device appropriate for the reduced hazard.
- You will be required to advise Council of any changes to the business activity undertaken on the property so that the hazard may be reconsidered.

What happens if a property owner does not undertake testing of the backflow device when required to do so?

Council has a number of enforcement options, from issuing orders for the works to be completed, to disconnecting the property from the water supply.

Council has advised me that I require a backflow prevention device. How long do I have before it needs to be installed?

You will have three months to complete the installation.

What happens if a property owner is not happy that Council has determined that a backflow prevention device is required? What can I do?

The determination that a property needs a backflow prevention device is based on the current or potential usages of the water supplied to the property. The Australian Standard AS3500, based on these uses, then determines the hazard rating.

If the property owner does not want to install a device, then the property owner must remove all current and potential usages for which the water is supplied to the property. In most cases, this will not be possible, i.e. the property's water usage is for agricultural or horticultural purposes and the potential to use the water for this purpose will always remain.

However if the property owner supplies more detailed specific information, this may lead to assignment of a different hazard.

What if I chose not to install a backflow prevention device even though I am required to do so?

The *NSW Local Government Act 1993* empowers Council to direct a property owner to install a backflow prevention device.

If a property owner does not comply with the regulatory requirements, Council may, under the *NSW Local Government Act 1993*, impose the following:

1. Give Notice under the *Local Government Act 1993* directing the installation of the backflow prevention device. The Notice will detail the customer's rights and responsibilities in complying with the order.
2. If a customer fails to comply with the order, Council may give effect to the order and recover the cost of doing so from the person concerned.

Who can I get to undertake the regular 12-monthly test of my backflow prevention device?

You need to engage a licensed plumber who has completed special NSW Government Backflow Prevention Training. Council has a list of some of these plumbers and it is available on Council's website, or by emailing Council's Backflow Prevention Officer, David Schneider, at council@rous.nsw.gov.au.

However it must be understood that Council is not recommending any of these plumbers. It is recommended that you make an appropriate assessment of the plumber that you wish to engage (insurance, references, etc.). The licensed plumber should provide their NSW Government Backflow Prevention Accreditation.

What if the testing reveals maintenance is required?

Minor maintenance such as renewal of seals or springs could normally be carried out by the plumber when undertaking the testing. If there is a major problem, the device may have to be replaced by the property owner.

What if the backflow prevention device needs replacing?

Council's policy for backflow prevention states that the replacement of the device at the end of its life is the responsibility of the property owner. Affected property owners will need to engage a licensed plumber certified in backflow prevention.

Where can I obtain more information?

Visit Council's Administration Building, 218–232 Molesworth Street, Lismore, or our website at www.rous.nsw.gov.au

If you require technical information, please contact Council's Backflow Prevention Officer, David Schneider, on (02) 6623 3800 or via email: council@rous.nsw.gov.au

Backflow terms and definitions

Air gap	A physical separation between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.
Approved air gap	An air gap gains approval by being at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel.
Backflow	Flow in a direction contrary to the normal or intended direction. The unintended flow of water from a potentially polluted source into a potable water supply.
Back pressure	The difference between the pressure within any water service and a higher pressure within any vessel or pipework to which it is connected. For example, a customer is using water at a higher pressure than the pressure supplied by SACWSD.
Backflow prevention device	A device to prevent backflow. There are a number of different devices, including a reduced pressure zone device, a pressure vacuum breaker, a double-check device and a registered air gap.
Backflow Prevention Device Inspection and Maintenance Report	Form that a backflow accredited plumber completes to certify the correct commissioning and function of the backflow device.
Backflow prevention policy	A policy developed by a local water utility that specifies requirements for both new and existing properties, where there is a risk of contaminating the water supply.
Back siphonage	Back siphonage occurs when the water supply pressure falls below atmospheric pressure.
Containment protection device	A backflow prevention device installed at the water meter(s) on the property boundary to prevent backflow from within the property.
Contaminant	Any solid, liquid, or gas with potential to enter or pollute the potable water supply.
Cross-connection	Any faulty plumbing connection to a potable water supply system through which potable (drinking) water is supplied to a service outlet and through which contaminants unfit for human consumption can enter the potable water lines by back pressure or back siphonage backflow.
Double-check valve device (DCV)	A device composed of two independently acting check valves, including tightly closing resilient seated shut-off valves attached at each end of the device and fitted with properly located resilient seated test cocks.
Isolation device	A backflow prevention device installed at the connection to specified sections of a plumbing system within a building or facility.
Licensed plumber	A plumber with a license issued by the NSW Office of Fair Trading.
Local water utilities (LWUs)	Local water utilities are the water authorities in regional NSW that supply water to their residents.
Non-potable water	Water is deemed non-potable if there is potential for contamination from an unprotected source.
Pollutant	An impairment of the quality of the public potable water supply that does not create a hazard to the public health, but which does adversely affect the aesthetic qualities of such potable waters for domestic use.
Potable water	Water that is suitable for human consumption.
Reduced pressure zone device (RPZ)	A device composed of two independently acting check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves. This unit also includes tightly closing resilient seated shut-off valves attached at each end of the device and properly located resilient seated test cocks.
Service connection	The point of delivery from the public potable water system to the consumer (i.e. meter location).