

**Date:** Wednesday 16 December 2009                      **Issue number:** 2009-4  
**Issue(s):** New Backflow Prevention Policy  
**Audience:** Proponents, Project Managers, Designers, Construction Supervisors,  
Constructors

## New Backflow Prevention Policy

Power and Water Corporation is committed to providing safe drinking water (potable water) to their customers. Part of the process to provide safe drinking water involves analysing the various hazards to the safety of the water supply and ensuring that there are barriers to control or eliminate those hazards.

One serious risk that exists in most major water supply systems is the possibility of backflow of contaminated water from hazardous sites into the potable water supply system. Backflow events in Australia and overseas have previously resulted in fatalities and serious cases of poisoning.

To protect the potable water supply from backflow contamination and to ensure it is safe to drink, PWC require backflow prevention devices be installed at the property boundary.

PWC's Back Flow Prevention Policy and Backflow Prevention Manual specifies requirements for the installation, maintenance and testing of backflow prevention devices for new and existing services.

Customer Handout No 7 (refer attached) provides a brief overview of the backflow requirements for government agencies, developers, consultants, contractors, property owners, business owners and people involved in the water industry.

## How can I get more information?

The Service Development Section of PWC administers the Connection Code and associated activities. This includes the asset creation process and Backflow Prevention Policy for the Corporation's water supply and sewerage infrastructure. The Connection Code and Backflow Prevention Manual internet pages are available on our internet:

[http://www.powerwater.com.au/business/for\\_business\\_and\\_developers/water\\_services\\_connection\\_code](http://www.powerwater.com.au/business/for_business_and_developers/water_services_connection_code)

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# Backflow Prevention

The Power Water Corporation (PWC) has developed and implemented a Backflow Prevention Policy. The aim of this policy is to assist the Corporation to provide a good quality, safe and reliable drinking water supply.

## Backflow Prevention Manual

A Backflow Prevention Manual has been developed to provide clear guidelines on PWC's backflow requirements. Electronic copies of this document are available on the Corporation's website. Hard copies of the document are available from the Services Development Section.

## Legislation and standards

In developing the Backflow Prevention Manual, PWC has referenced or complied with the requirements of the following legislation and standards:

AS/NZS 2845.1	Water Supply – Backflow prevention devices – Materials, design and performance requirements
AS 2845.2	Water Supply – Backflow prevention devices – Air gaps and break tanks
AS 2845.3	Water Supply – Backflow prevention devices – Field testing and maintenance
AS/NZS 3500.1	Plumbing and drainage – Water Services
<i>Water Supply and Sewerage Services Act</i>	
PWC Customer Contract	PWC Standard Drawings

## Level of hazard and backflow installation requirements

All properties connected to the PWC potable water supply must be assessed to determine the level of hazard the property presents to the water supply system. The Australian Standard AS/NZS 3500.1 has a hazard rating system to ensure that the correct backflow protection device is selected for the property. The ratings are:

- High hazard** Any condition, device or practice that, in connection with the drinking water supply system, has the potential to cause death
- Medium hazard** Any condition, device or practice that, in connection with the drinking water supply system, has the potential to endanger health
- Low hazard** Any condition, device or practice that, in connection with the drinking water supply system, constitutes a nuisance but does not endanger health

In general, properties rated as a low hazard are not required to install testable backflow prevention devices at the property boundary. Water meters fitted with integral dual check valves or stand alone non testable dual check valves satisfy the requirements of the relevant Australian Standards. Where a property has a second water supply of known quality, PWC may accept a non testable dual check valve with an atmospheric vent as an appropriate backflow device.

Properties rated as a high or medium hazard are required to install testable backflow prevention devices at the property boundary. The type of device to be installed is specified in the relevant Australian Standards.

PWC Standard Drawings for water meter installation provide advice and guidance on backflow requirements.

Examples of backflow requirements for high hazard properties	Backflow prevention device
Abattoirs, fish processing plants, veterinary clinics, taxidermists	RBT or RPZD
Chemical plants, factories or suppliers, chemical dispensers or injectors	RBT or RPZD
Commercial laundry, dry cleaning facilities	RBT or RPZD
Cooling towers, grease trap hose out points	RBT or RPZD
Effluent reuse, sewage treatment plants and sewer pump stations	RBT or RPZD
Hospitals, dialysis centres, autopsy areas, funeral parlours, etc	RBT or RPZD
Irrigation systems with chemical injection	RBT or RPZD
Laboratories including chemical, pathology, industrial, teaching	RBT or RPZD
Pest control facilities	RBT or RPZD
Petroleum products processing and storage facilities	RBT or RPZD
Motorhome effluent dump points, rubbish dumps	RBT or RPZD

Examples of backflow requirements for medium hazard properties	Backflow prevention device
Caravan parks, marinas, secondary school laboratories	DCV
Food and beverage processing plant	DCV
Irrigation systems without chemical injection – non residential	DCV
Premises with grey water reuse scheme	DCV
Public and commercial swimming pools, spas, fountains	DCV
Water mains in subdivisions not yet approved for connection to Power and Water system	DCV

<b>DCV</b> - Double Check Valve	A testable device designed for use in medium hazard conditions to prevent backflow caused by back siphonage or back pressure
<b>DuCV</b> - Dual Check Valve	A non testable device designed for use in low hazard conditions to prevent backflow caused by back siphonage or back pressure. Some valves may incorporate an atmospheric vent
<b>RBT</b> - Registered Break Tank	A tank installed to satisfy backflow requirements incorporating an air gap (refer AS 3500:1)
<b>RPZD</b> - Reduced Pressure Zone Device	A testable device designed for use in high hazard conditions to prevent backflow caused by back siphonage or back pressure
<b>SCV</b> - Single Check Valve (fixed fire services)	A testable device designed for use in low hazard conditions to prevent backflow caused by back siphonage or back pressure, specifically designed for use with fixed fire services

## Registration of devices

PWC maintain a Backflow Register for testable backflow prevention devices installed as boundary protection. To allow the device to be registered, the Backflow Prevention "Notice of Installation" and "Valve Test Certification Report" must be completed and forwarded to PWC as specified in the Backflow Prevention Manual. Completed documents may be emailed to PWC: [backflowprevention@powerwater.com.au](mailto:backflowprevention@powerwater.com.au)

## For more information

For more information phone Services Development Northern Region on (08) 8995 5801, Services Development Southern Region on (08) 8951 7312 or the Manager Trade Waste on (08) 8995 5807.