

Backflow Prevention



What is Backflow?

Backflow is the reversal of water flow from its normal or intended direction of flow. Whenever a water utility connects a customer to its water distribution system, the intention is for the water to flow from the distribution system to the customer.

However, it is possible and common for the flow to be reversed and flow from the customer's plumbing system back into the public water distribution system. If harmful substances exist within the user's plumbing system when backflow occurs, then it is possible to contaminate the public water system.

Should this occur, it is possible for unsanitary water from the customer's plumbing system to be sucked back into the Council water system. If the water in the customer's system has come into contact with harmful substances and it backflows into the Council drinking water system, it could cause illness or, in extreme cases, death.

What causes backflow?

Backflow is usually caused by back-pressure or back-siphonage. Back-pressure is a condition caused when the water pressure within a customer's plumbing system exceeds that of the Council water distribution system supplying it.

Back-pressure can result from an increase in pressure on the customer's side—due to pumps, steam boilers, or other means—or from a decrease in pressure in the Council distribution system due to water line flushing, fire fighting, or water main breaks.

Back-siphonage is a condition caused when there is a loss of water pressure causing a negative pressure (i.e. vacuum) within the distribution system. The effect is similar to drinking water through a straw. This can occur due to nearby firefighting, water main breaks, water line flushing, or other situations that cause a significant loss in water system pressure.



Where are the most common cross-connections?

Whenever a plumbing fixture is connected to the public drinking water supply, a potential cross-connection exists. Some examples of cross-connections that can lead to backflow are:

- wash basins and service sinks
- laboratory equipment
- irrigation or lawn sprinkler systems
- swimming pools and spas
- fire sprinkler systems
- fire fighting services (hydrants and hose reels)
- air conditioning cooling towers
- vehicle washing facilities
- auxiliary water supplies (wells, storage tanks)
- photo developing equipment
- chemical feed equipment
- food and beverage processing equipment
- boiler
- and many others.

Why do I have to install a backflow prevention assembly?

To protect the customers of public water providers, the *Queensland Plumbing and Drainage Regulation 2019* (the Regulation) states that an appropriate BFPD must be installed on premises if pollution of the water supply on the premises or the water service provider's water service to the premises has been, or could be, caused by the plumbing on the premises.

As a water supplier, Council has a responsibility to provide safe drinking water under all foreseeable circumstances to its customers. In addition, customers generally have absolute faith that water delivered to them through a public water system meets all federal and state requirements and is safe to drink.



What is a backflow assembly?

Backflow assemblies are devices placed on potential cross-connections to prevent water from flowing back into the public water system. The most common type of backflow assemblies are a Reduced Pressure Zone device (RPZ) and a Double Check Valve Assembly device (DCVA). Both the RPZ and DCVA type backflow prevention assemblies are testable to ensure they are in proper working order.

Placed just downstream of a water meter to an establishment, they can protect the public water system from any contamination that may occur within the entire establishment's plumbing system.

Does my backflow assembly need to be tested?

Yes. In accordance with section 101 (Testable backflow prevention devices) of the Regulation, a local government must implement and maintain a program for its local government area for the registration, maintenance and testing of testable BFPDs installed in the area.

As per the Regulation, a certified tester must check all backflow assemblies at the time of installation, annually after installation, after repairs, and after relocating. Backflow assembly testers are private plumbing contractors who possess valid and current certification and are certified by the Queensland Building and Construction Commission. These testers must submit a report to Council following the test. Testers can be found in the Yellow Pages under "Plumbing Contractor" or "Backflow Testers," or online.

Will I receive notification when to perform my test?

Yes. Council tracks the backflow assembly information in our database that will generate a reminder letter to customers of when their annual test is due. These letters are typically sent 45 to 60 days before the test is due. If you do not receive a reminder letter from Council, the absence of a reminder letter does not void the requirement of the annual inspection required by the *Plumbing and Drainage Act 2018*.

