

# Boundary Backflow Prevention in the Waimakariri District

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(over-seeing district backflow implementation programme)

# Background

- WDC's Backflow Prevention Policy introduced in May 2014
- The Council protects public health by taking measures to prevent backflow at the property boundary, i.e. point of supply
- Internal backflow protection responsibility of property owner under Building Act (2004)





# Regulations, Standards.....

- Health (Drinking Water) Amendment Act (2007) replaces Water Supplies Protection Regulations (1961)
- NZ Building Code (G12)
- NZ Drinking Water Standards 2005 (revised 2008)



# .....Guidelines & Code of Practice



WATER NEW ZEALAND

## **Boundary Backflow Prevention for Drinking Water Supplies**



May 2019

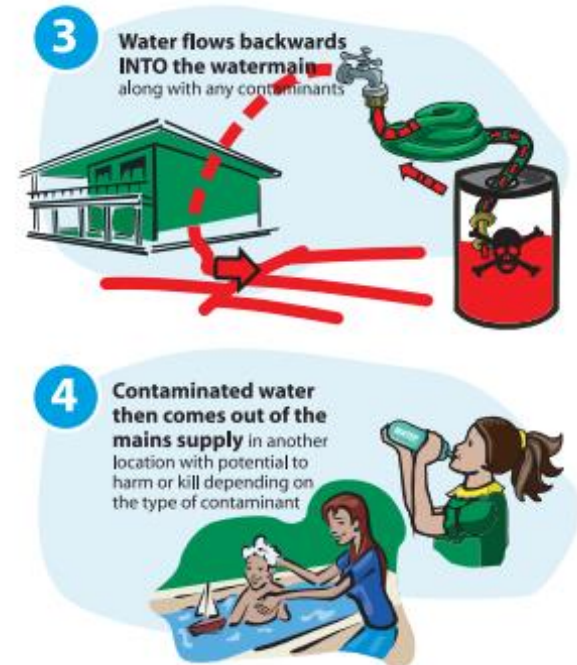
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# What is Backflow?

- Backflow considered a significant risk to water supplies
- When contaminated water from private property flows backwards into the public supply
- Caused by:
  - Back siphonage due to pressure loss (main break or fire)
  - Back pressure due to activity on private property

## What Causes Backflow?

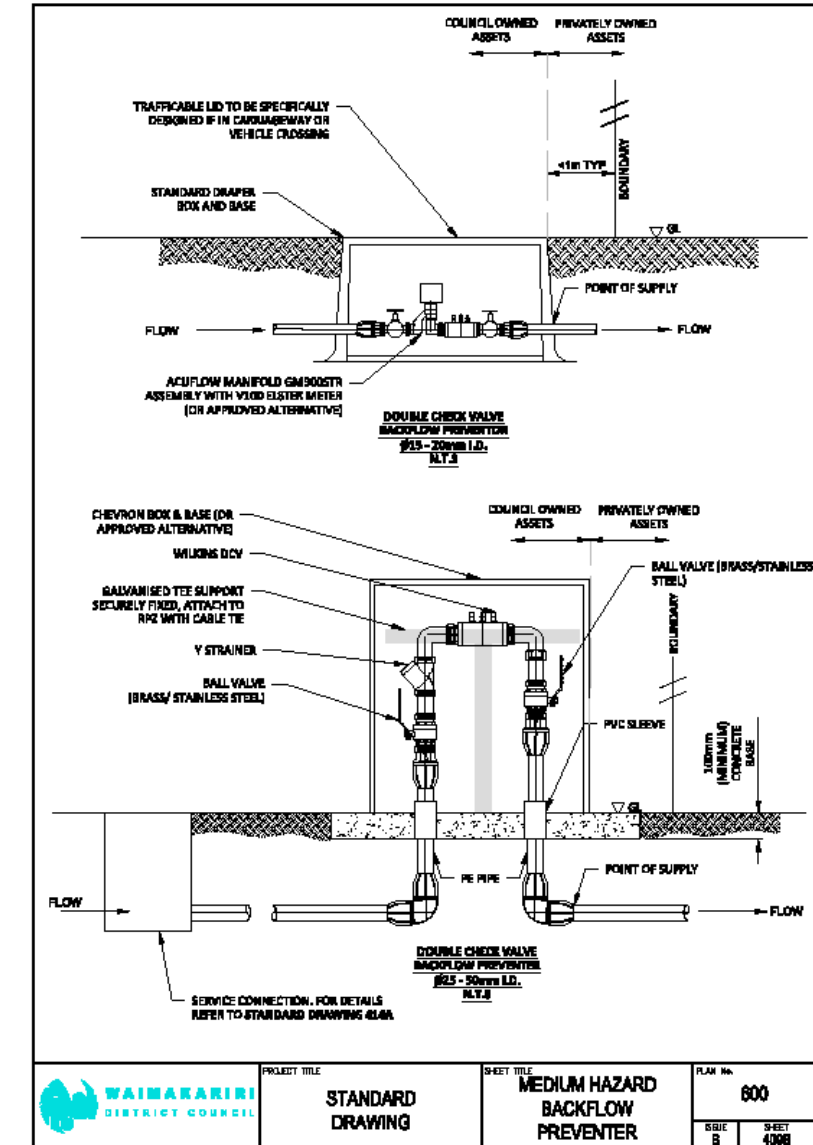
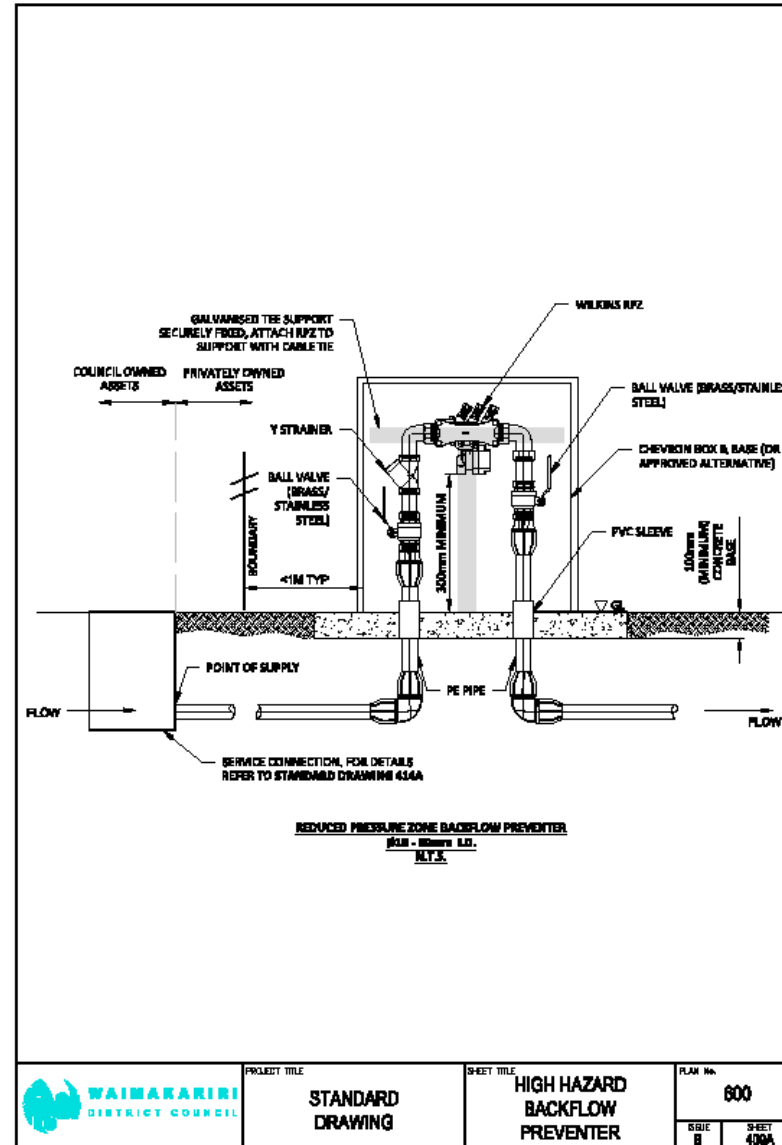


# WDC Backflow Prevention Policy

- Requires all properties to be assigned either a LOW, MEDIUM or HIGH hazard class:
  - ***LOW hazard:*** Typical residential section with no high or medium activities occurring. These properties require a normal toby box with non-testable dual check.
  - ***MEDIUM hazard:*** Any commercial properties that is not high risk. Require a testable double check, which usually fits in normal toby box.
  - ***HIGH hazard:*** Any property that undertakes an activity defined as high hazard, based on Building Act definitions. Require an above ground “RPZ” device to be installed immediately on private side of boundary. These are private assets that are privately funded.

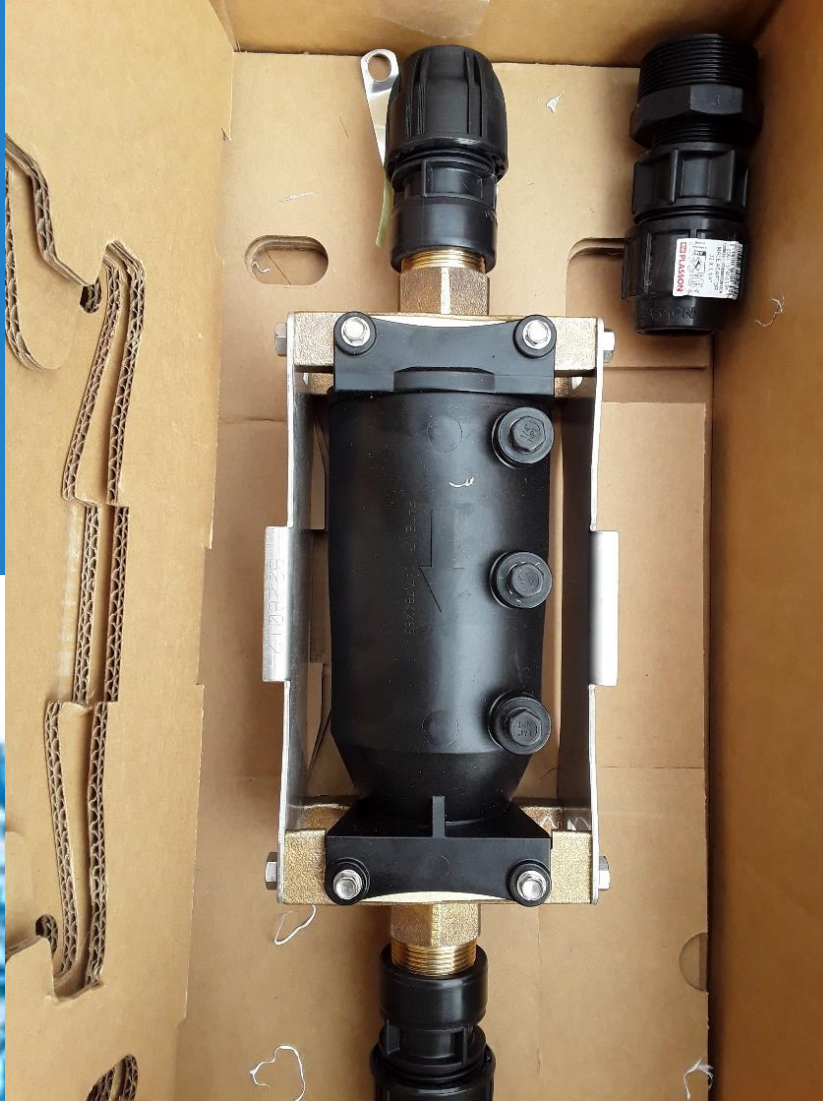
# WDC Standard Drawings for BFD Installations

- Medium and High Hazard BFDs
- All BFD installers have to adhere to these standards





# Backflow Installations in the District





# Backflow Installations in the District





# Duty of Care

- Duty of care/responsibility for public health





# Has backflow contamination ever affected NZ?

- A number of documented incidents of contaminants entering drinking water supply in NZ
- Well known serious incident in 1994 – customer burnt by caustic soda
- Numerous more recent NZ cases involving suite of contaminants such as compressed air, paint, beer, orange juice, fish, tomato sauce and black water from stagnant fire sprinklers

# Fire Connections in the District

- WDC does not take responsibility for testing of these devices
- Left to the commercial fire experts





# Education

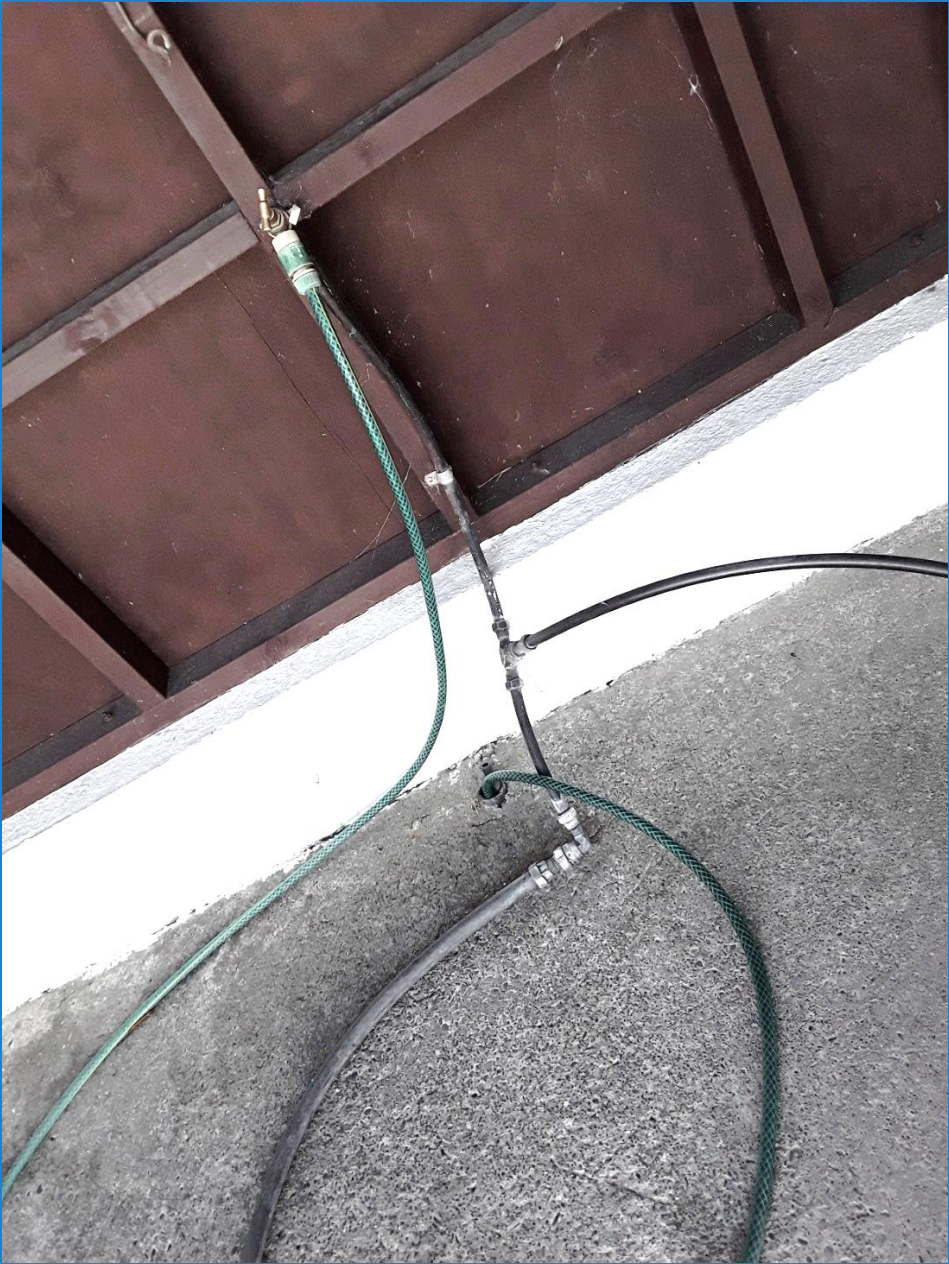
- All personnel working on public water networks have duty of care to be knowledgeable about backflow requirements
- Opportunities to upskill with recognised training providers
- More stringent Drinking Water Standards to meet, including hygiene practices etc.



# “Where’s” and “Why’s”

























# Questions?

