Title	**Describe suitability, installation, and testing of water supply backflow prevention devices, and fault identification**		
Level	**3**	**Credits**	**4**

Purpose	This unit standard is for people who work in the plumbing industry. People credited with this unit standard are able to describe: – the suitability of water supply backflow prevention devices for areas of identified risk; – the installation, connection, protection, commissioning, and testing of water supply backflow prevention devices; and – the causes of, and methods to rectify, faults in water supply backflow prevention devices.

Classification	Plumbing, Gasfitting and Drainlaying > Plumbing

Available grade	Achieved

Guidance Information

1 References
Health Act 1956;
Health and Safety at Work Act 2015;
Health (Drinking Water) Amendment Act 2007;
Local Government Act 2002;
The following standards, which are available at http://www.standards.govt.nz:
AS/NZS 2845.1:2010 *Water Supply – Backflow prevention devices – Materials, design and performance requirements*, or alternative relevant ASSE (American Society of Sanitary Engineers) standards,
AS/NZS 3500.1:2015 *Plumbing and drainage – Water services*,
NZS 5807:1980 *Code of practice for industrial identification by colour, wording or other coding*;
The following clauses, and any related compliance documents, which are available at https://www.building.govt.nz/:
New Zealand Building Code, Clause G12 Water Supplies (Section 9.0 Equipotential bonding);
The following code, available from New Zealand Water https://www.waternz.org.nz/Article?Action=View&Article_id=48:
Boundary Backflow Prevention for Drinking Water Suppliers Code of Practice, 2013;
Cross Connection Control Manual, February 2003, Chapter 5, EPA 816-R-03-002;
and all subsequent amendments and replacements.

2 Range
Backflow prevention devices for – atmospheric vacuum break (AVB), pressure vacuum breaker (PVB), spill proof vacuum breaker (SPVB), registered air gap, double detector check, double check valve (Dual check), hose connection vacuum breaker, reduced pressure zone device, vacuum break, vented dual check.

Outcomes and performance criteria

Outcome 1

Describe the suitability of water supply backflow prevention devices for areas of identified risk.

Range high risk, medium risk, low risk situations.

Performance criteria

1.1 Describe backflow prevention devices in accordance with their suitability for identified risk and manufacturers' instructions.

Outcome 2

Describe the installation, connection, protection, commissioning, and testing of water supply backflow prevention devices.

Performance criteria

2.1 Describe the installation of backflow prevention devices in accordance with manufacturers' instructions, and relevant standards and codes.

2.2 Describe the connection of backflow prevention devices in accordance with manufacturers' instructions, and relevant standards and codes.

2.3 Describe the protection of backflow prevention devices in accordance with manufacturers' instructions, and relevant standards and codes.

2.4 Describe the obligations of the tester and the importance of testing backflow devices in terms of legislative requirements.

2.5 Describe the commissioning of backflow prevention devices in accordance with manufacturers' instructions, and relevant standards and codes.

2.6 Describe ethical considerations involved in the installation and testing of backflow devices, and the implications of not recognising appropriate responses.

Range manipulation of testing results, judgment of cost effective rectification of results, properly conducting contracted work.

Outcome 3

Describe the causes of, and methods to rectify, faults in water supply backflow prevention devices.

Performance criteria

3.1 Describe the causes of faults in backflow prevention devices, and means of identifying them in accordance with manufacturers' instructions.

3.2 Describe methods of rectifying faults in backflow prevention devices in accordance with manufacturers' instructions.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 October 2007	31 December 2022
Review	2	23 November 2017	31 December 2028
Review	3	30 May 2024	31 December 2028

Consent and Moderation Requirements (CMR) reference	0003

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.