

<b>Title</b>	<b>Demonstrate knowledge of pressure zones and backflow prevention in water reticulation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	People credited with this unit standard are able to demonstrate knowledge of pressure zones and backflow prevention in water reticulation.
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<b>Classification</b>	Water Industry > Water Reticulation
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation and references relevant to this unit standard include: Health Act 1956, Health and Safety at Work Act 2015, Local Government Act 2002, and subsequent amendments; *Water Meter Code of Practice* (2003), and *Backflow Prevention for Drinking Water Suppliers Code of Practice* 2006, available from <http://www.waternz.org.nz>; NZS 9201.7:2007 *Model general bylaws - Water supply*; NZS 4404:2010 *Land Development and Subdivision Infrastructure*; AS/NZS 2845.1:2010 *Water supply - Backflow prevention devices – Part 1: Materials, design and performance requirements*, NZ standards are available from <http://www.standards.govt.nz>; *Drinking Water Standards for New Zealand 2005 (Revised 2008)*, Ministry of Health, Wellington.
- 2 Definition  
*Water reticulation* – in this context refers to all pipe systems, pumping systems, and components that contribute to the distribution of water.

### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of pressure zones in water reticulation.

#### Performance criteria

- 1.1 Pressure and flow are described in terms of ground levels, water pressure, and water demand.
- 1.2 Pressures in networks are described in terms of accepted levels for minimum and maximum pressure.

- 1.3 Measurement of water pressure is described in terms of the methods used and implications of results.
- 1.4 A pumping system is described in terms of its use in controlling pressure.
- 1.5 Zone valves are described in terms of their distinguishing features, locations, and conditions for their use.
- 1.6 Control valves are described in terms of their use and operation.  
 Range pressure sustaining, pressure reducing, pressure relief, altitude, flow control.

**Outcome 2**

Demonstrate knowledge of backflow prevention in water reticulation.

**Performance criteria**

- 2.1 Backflow is described in terms of the implications for localised contamination of drinking-water supplies, and for compliance with the *Drinking Water Standards for New Zealand*.
- 2.2 Backflow prevention techniques are described in terms of their operation, and methods of testing for satisfactory operation.  
 Range evidence is required for at least two backflow prevention techniques.
- 2.3 Backflow prevention techniques are described in terms of their suitability for consumer situations.  
 Range air gap, reduced pressure zone (RPZ), double check valve.

<b>Replacement information</b>	This unit standard and unit standard 18458 were replaced by unit standard 31520.
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**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	26 October 2005	31 December 2016
Rollover and Revision	2	20 February 2009	31 December 2016
Rollover and Revision	3	21 July 2011	31 December 2016
Revision	4	18 April 2013	31 December 2018
Review	5	16 March 2017	31 December 2021
Review	6	29 November 2018	31 December 2021

**Consent and Moderation Requirements (CMR) reference**

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