

Title	Demonstrate knowledge of water meters and reading techniques, and identify faults in meters		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the operation, uses, classes, applications, installation, and limitations of water meters; describe water meter reading techniques, take readings, and calculate flow rates and volume from a water meter; and identify faults in, and service requirements of, a water meter.
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Classification	Water Industry > Water Reticulation
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Available grade	Achieved
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Explanatory notes

- 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 available from www.waternz.org.nz.
 NZS 9201.7:2007 *Model general bylaws - Water supply*, available from <http://www.standards.govt.nz>;
Drinking Water Standards for New Zealand 2005 (Revised 2008), [Ministry](#) of Health, Wellington;
 OIML R49:2013 *Water meters for cold potable water and hot water*, available from https://www.oiml.org/en/files/pdf_r/r049-1-e13.pdf;
 Local authority water supply bylaws, available from local councils.
- 2 Definition
Water reticulation – in this context refers to all pipe systems, pumping systems, and components that contribute to the distribution of water.
- 3 Water meters include but are not limited to – positive displacement, inferential, helix, magflow, combination meters, manifold, domestic, ultrasonic, differential pressure.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of the operation, uses, classes, applications, installation, and limitations of water meters.

Range evidence is required for at least two water meters.

Evidence requirements

- 1.1 Water meters are described in terms of their operation.
- 1.2 Water meters are described in terms of their uses, and applications.
- Range zone, reservoir, survey;
revenue – commercial, industrial, residential.
- 1.3 Water meters are described in terms of the relationship between classes and accuracy.
- 1.4 Water meters are described in terms of their installation requirements and procedures.
- 1.5 Water meters are described in terms of their limitations.
- Range high flow, low flow.

Outcome 2

Describe water meter reading techniques, take readings, and calculate flow rates and volume from a water meter.

Range evidence is required for at least one water meter.

Evidence requirements

- 2.1 Meter reading techniques are described in terms of their applicability for different situations.
- Range remote reading, telemetry, on-site data logging.
- 2.2 Readings from a water meter are taken in accordance with manufacturer's specifications, and water supplier's requirements.
- 2.3 Water meter flow rate and volume is calculated for a water meter in operation.
- Range increase in throughput over specified time, time for specified throughput.

Outcome 3

Identify faults in, and service requirements of, a water meter.

Evidence requirements

- 3.1 Faults in a water meter are identified in accordance with historical consumption.
- 3.2 Water meter service requirements are described in accordance with manufacturer's specifications and local authority requirements.

Planned review date	31 December 2021
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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 2018
Review	4	16 March 2017	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.