

<b>Title</b>	<b>Demonstrate knowledge of water quality and water sampling in drinking-water supply networks</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	People credited with this unit standard are able to: describe the causes and effects of variation in water quality in a drinking-water supply network, and the reasons for water quality monitoring; describe water sampling programmes for drinking-water supply networks; and describe the water tests carried out on drinking-water supply networks.
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<b>Classification</b>	Infrastructure Works > Pipeline Construction and Maintenance
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- 2 Legislation and standards relevant to this unit standard include:  
Health and Safety at Work Act 2015 and any subsequent amendments;  
*Drinking Water Standards for New Zealand 2005* (Revised 2018) available at <https://www.health.govt.nz/>.
- 3 Definition  
*Industry requirements* refer to relevant policies, processes, methodologies, industry codes of practice, site specific health and safety plans, standard operating procedures, site safety plans, quality plans, work plans, traffic management plans, contract work programmes, job safety analysis, safe work method statements, job instructions, manufacturer's requirements, contract specifications, manuals, procedural documents, Waka Kotahi New Zealand Transport Agency specifications and guidelines.

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### Outcomes and performance criteria

#### Outcome 1

Describe the causes and effects of variation in water quality in a drinking-water supply network, and the reasons for water quality monitoring.

**Performance criteria**

- 1.1 Variations in water quality as indicated by the presence of helminths, protozoa, bacteria, and viruses are described in terms of the causes.
- 1.2 The presence of microbes in the water supply is described in terms of the effects on human beings.
- 1.3 Causes of variations in water quality are described in terms of their effect on water.
- 1.4 Water quality monitoring is described in terms of the reasons for its requirement.

**Outcome 2**

Describe water sampling programmes for drinking-water supply networks.

**Performance criteria**

- 2.1 Requirements for water sampling programmes relevant to water suppliers are described in accordance with the *Drinking Water Standards for New Zealand*.
- 2.2 Frequency and location of sampling are described.
- 2.3 The procedures for investigating causes of, and responses to, reported transgressions from the requirements of the *Drinking Water Standards for New Zealand* are described.

**Outcome 3**

Describe the water tests carried out on drinking-water supply networks.

**Performance criteria**

- 3.1 Water tests are described in terms of the reasons they are carried out and the implications of levels achieved.  
  
Range        bacteriological, aesthetics, chemical.
- 3.2 Water tests are described in terms of the implications to the asset owner of non-compliance with guideline values and maximum acceptable values.

<b>Planned review date</b>	31 December 2026
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 August 2021	N/A

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

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### Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation [qualifications@connexis.org.nz](mailto:qualifications@connexis.org.nz) if you wish to suggest changes to the content of this unit standard.