

<b>Title</b>	<b>Demonstrate knowledge of small wastewater systems</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to, for small wastewater systems, demonstrate knowledge of: wastewater treatment processes; the components used for distribution of treated wastewater; and monitoring and recording procedures.
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<b>Classification</b>	Water Industry > Wastewater Treatment
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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 relevant to this unit standard includes: Health and Safety at Work Act 2015, Water Services Act 2021, Hazardous Substances and New Organisations Act 1996, Health and Safety at Work (Hazardous Substances) Regulations 2017, and subsequent amendments.
- 3 Definitions  
*Industry requirements* include manufacturers' specifications; and enterprise requirements which may include documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.  
*Small wastewater system* refers to a system treating wastewater from 50 up to 500 people, and which includes collection, treatment, and discharge.
- 4 Learning and assessment activities for this unit standard must be informed by Te Mana o te Wai (refer to [Taumata Arowai](#)) and the *National Policy Statement for Freshwater Management 2020* available at <https://environment.govt.nz/>.

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of wastewater treatment processes for small wastewater systems.

**Performance criteria**

- 1.1 Wastewater treatment processes and water quality parameters are described in terms of inter-relationship, barriers to contamination and suitability of treatment process.
- 1.2 Wastewater treatment settlement processes are described in terms of their effect on contaminant removal.
- 1.3 Wastewater treatment filtration processes are described in terms of their effect on particulate removal, maintenance, and operating cost.
- 1.4 Wastewater treatment disinfection processes are described in terms of their effect on microbiological contaminants, the dose rates required, maintenance, and operating cost.
- 1.5 Wastewater treatment pH control processes are described in terms of their aesthetic impact, impact on disinfection, and corrosion control.

**Outcome 2**

Demonstrate knowledge of the components used for distribution of treated wastewater in small wastewater systems.

Range tanks, pipes, pumps, valves, backflow preventers, meters.

**Performance criteria**

- 2.1 Components used in distribution are described in terms of their purpose and function.
- 2.2 Hygienic methods of installation and maintenance are described for each component.
- 2.3 Preventative maintenance requirements are identified and their purpose explained for each component.

**Outcome 3**

Demonstrate knowledge of monitoring and recording procedures for small wastewater systems.

**Performance criteria**

- 3.1 Frequency of and reasons for monitoring of treated wastewater are explained.
- 3.2 Sampling results are compared to organisational and compliance requirements.
- 3.3 Maintenance of wastewater monitoring records is described.

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<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	24 February 2022	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>.

**Comments on this unit standard**

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihanga.nz](mailto:qualifications@waihanga.nz) if you wish to suggest changes to the content of this unit standard.