

Title	Describe wastewater treatment processes, hazards, and the management of critical control points		
Level	4	Credits	20

Purpose	People credited with this unit standard are able to describe: wastewater treatment processes and their interrelationships in the treatment of wastewater; hazards; and the management of critical control points for wastewater treatment processes.
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Classification	Water Industry > Wastewater Treatment
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Available grade	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 organisational procedures and legislative requirements.
- 2 Legislation, regulations and industry standards relevant to this unit standard include but are not limited to – Health and Safety at Work Act 2015; Resource Management Act 1991; Hazardous Substances and New Organisms (HSNO) Act 1996; and any subsequent amendments or replacements.
- 3 **Definitions**
Critical control points – specific point, procedure, or step in wastewater treatment processes at which control can be exercised to reduce, eliminate, or prevent the possibility of an environmental or public health hazard.
Events – unplanned circumstances that negatively affect the plant’s performance. Events may include – flooding, water ingress, mechanical malfunction, natural disaster, illegal discharge, illegal trade waste, hydraulic overloading, toxicity overloading, computer/PLC system malfunction, electricity disruption, human intervention.
Organisational procedures – instructions to staff, and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – site specific requirements, manufacturers’ specifications, product quality specifications, and legislative or regulatory requirements.
Wastewater may include stormwater and sewerage systems.
- 4 For the purpose of this unit standard, processes for which evidence is required include but are not limited to – activated sludge, biosolids, disinfection, fixed growth reactor, lagoon, filtration, oxidation pond, separation, wetlands, nutrient removal, odour control, sludge, preliminary processes.

Outcomes and performance criteria

Outcome 1

Describe wastewater treatment processes and their interrelationships in the treatment of wastewater.

Performance criteria

- 1.1 The purpose of each wastewater treatment process is described.
- 1.2 The interrelationships between wastewater treatment processes are described.
- 1.3 The inputs and outputs of wastewater treatment process control is described.
- 1.4 The purpose and function of wastewater treatment process monitoring equipment are described.
- 1.5 Plans, drawings and specifications used in wastewater treatment processes are described.
- 1.6 The impact of wastewater treatment processes on discharge is described.
Range quality, quantity.

Outcome 2

Describe hazards and the management of critical control points for wastewater treatment processes.

Performance criteria

- 2.1 The causes of, and risks posed by, hazards in each wastewater treatment process are described.
- 2.2 The management of critical control points related to wastewater treatment hazards are described.
- 2.3 Preventive and corrective actions for events related to each wastewater treatment hazard are described.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 September 2019	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>.

Comments on this unit standard

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