

Title	Describe and operate separation processes in wastewater treatment		
Level	4	Credits	9

Purpose	People credited with this unit standard are able to: describe separation processes; monitor and adjust separation processes; and carry out maintenance procedures on separation process equipment in wastewater treatment.
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Classification	Water Industry > Wastewater Treatment
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Available grade	Achieved
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Guidance Information

- 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. Evidence for assessment of the practical aspects of this unit standard must be gathered using the separation processes in the candidate's own workplace.
- Legislation relevant to this unit standard includes but is not limited to: Health and Safety at Work Act 2015, Water Services Act 2021, Resource Management Act 1991, Hazardous Substances and New Organisms (HSNO) Act 1996, and subsequent amendments.
- 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.
Wastewater may include stormwater and sewage systems.
- 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 from <https://environment.govt.nz/>.

Outcomes and performance criteria

Outcome 1

Describe separation processes in wastewater treatment.

Range settlement, air-based flotation.

Performance criteria

- 1.1 The purpose and principles of the separation processes are described in terms of reduction and removal of solid matter.
- 1.2 Plant configuration options for separation processing are described in terms of their hydraulic layout options, solids wasting and return methods, advantages, and disadvantages.
- Range two plant configuration options.
- 1.3 Separation processes are described in terms of the function of component parts and identification of process failure.
- 1.4 Separation processing is described in terms of the process outputs and legislative requirements for their disposal.

Outcome 2

Monitor and adjust separation processes in wastewater treatment.

Performance criteria

- 2.1 Process tests are described for separation processing.
- Range organics, total suspended solids, settled solids, settleability.
- 2.2 The performance measures for separation processes are described in terms of efficiency and downstream effects.
- 2.3 Testing equipment is calibrated, tests or measurements for monitoring process inputs are carried out, and results are recorded.
- 2.4 Process inputs are adjusted.
- 2.5 Any required consumables are checked and ordered.

Outcome 3

Carry out maintenance procedures on separation process equipment in wastewater treatment.

Performance criteria

- 3.1 Preventative maintenance procedures are carried out and recorded.
- 3.2 Any required repairs are carried out according to process and/or equipment failure.
- 3.3 Actions for maintaining process continuity are carried out.

Planned review date	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	16 March 2017	31 December 2023
Review	2	28 April 2022	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 Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.