

Title	Describe and operate effluent filtration processes in wastewater treatment		
Level	4	Credits	12

Purpose	People credited with this unit standard are able to: describe effluent filtration processes; monitor and adjust effluent filtration processes; carry out maintenance procedures on effluent filtration equipment; and describe the storage, handling, and preparation of any chemicals, and chemical dosing systems used in effluent filtration 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

- 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. Evidence for assessment of the practical aspects of this unit standard must be gathered using the filtration processes in the candidate's own workplace.
- 2 Legislation relevant to this unit standard includes the Health and Safety at Work Act 2015, Water Services Act 2021, Resource Management Act 1991, Hazardous Substances and New Organisms (HSNO) Act 1996 and any 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.
Wastewater may include stormwater and sewage systems.
- 4 For the purpose of this unit standard, filtration includes physical filtration only, not biological filtration.
- 5 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 effluent filtration processes in wastewater treatment.

Performance criteria

- 1.1 The purpose and principles of effluent filtration are described in terms of the effective removal of particulate matter.
- 1.2 Plant configuration options for filtration are described in terms of their hydraulic layout options, solids wasting and return methods, separation requirements, advantages, and disadvantages.

Range includes but is not limited to – disk filters, membrane filters, sand/media filters, cloth weave filters.
- 1.3 The filtration process is described in terms of the function of its component parts and identification of process failure.
- 1.4 Filtration is described in terms of the process outputs.

Outcome 2

Monitor and adjust effluent filtration processes in wastewater treatment.

Performance criteria

- 2.1 Process tests are described for effluent filtration.
- 2.2 The performance measures for filtration 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.

Range reasons for adjustment – results of testing, analysis and identification of trends, response to process failure.
- 2.5 Any relevant consumables are checked and ordered.

Outcome 3

Carry out maintenance procedures on effluent filtration 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.

Outcome 4

Describe the storage, handling, and preparation of any chemicals, and chemical dosing systems used in effluent filtration in wastewater treatment.

Performance criteria

- 4.1 The storage, handling, and preparation of any chemicals used in filtration are described in terms of the HSNO Act 1996.
- 4.2 Any chemical dosing systems used in filtration are described in terms of the components, methods, and points of application.

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.