

<b>Title</b>	<b>Manage, monitor, and optimise separation processes in wastewater treatment</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to: manage, monitor, and optimise separation processes in wastewater treatment.
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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

- 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.
- Legislation relevant to this unit standard includes: 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  
*Critical control point* – specific point, procedure, or step in water treatment processes at which control can be exercised to reduce, eliminate, or prevent the possibility of a public health hazard.  
*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.  
*Optimise* – adjusting plant input variables to make the process as effective as possible to achieve the desired output, taking into account the constraints of cost, human input, effluent quality, and resource consent requirements.  
*Separation processes* include both settlement and flotation.  
*Sludge* – wastewater solids from separation processes including scum.  
*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

Manage separation processes in wastewater treatment.

#### Performance criteria

- 1.1 Process variables are managed to achieve the desired parameters and maintain separation process performance.

### Outcome 2

Monitor separation processes in wastewater treatment.

Range includes but is not limited to – inflow, outflow, Biochemical Oxygen Demand (BOD), total suspended solids (TSS), solids concentration, sludge solid concentration, sludge withdraw rate.

#### Performance criteria

- 2.1 Sampling is managed to ensure samples are collected.
- 2.2 Data is collected and interpreted in accordance with separation process requirements.

### Outcome 3

Optimise separation processes in wastewater treatment.

#### Performance criteria

- 3.1 The critical control points in separation processes are managed.
- 3.2 Separation process variables are adjusted for optimisation of the process in accordance with the results of monitoring.

<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	16 March 2017	31 December 2023
Review	2	28 April 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>.

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**Comments on this unit standard**

Please contact Waihanga 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.