

41222 Operate and control preliminary wastewater treatment processes

Kaupae Level	4
Whiwhinga Credit	12
Whāinga Purpose	This standard is for people who work as wastewater treatment operators. People with this skill standard have the skills to operate and control preliminary wastewater treatment processes to meet required treatment standards. This standard aligns with the New Zealand Certificate in Wastewater Treatment Operations (Level 4) with optional strands in Activated Sludge, Effluent Disinfection, Fixed Growth Reactor, Separation, Sludge Treatment, and Ponds [Ref: 5673] and may also contribute to other water services industry credentials.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Operate preliminary wastewater treatment processes.	a. Outline preliminary treatment processes in terms of purpose, operating principles, and relevant regulations.
	b. Compare the suitability of different plant and equipment configurations.
	c. Operate preliminary treatment processes to prepare wastewater for further treatment and meet operational and compliance requirements
2. Control preliminary wastewater treatment processes.	a. Perform process tests and measures and undertake operational observations, to optimise preliminary treatment processes in terms of flow and inflow constituents, to meet operational and compliance requirements.
	b. Interpret monitoring results to identify trends, variations, and emerging process issues.
	c. Record monitoring results and operational adjustments in accordance with operational requirements.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Maintain plant and equipment for preliminary wastewater treatment processes.	a. Maintain plant and equipment to ensure optimal process functionality.
	b. Identify and respond to faults or failures in accordance with operational requirements.
	c. Record maintenance in accordance with operational requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Ākonga must demonstrate that they can safely, consistently, and competently operate and control preliminary wastewater treatment processes in accordance with operational requirements, and applicable legislative and regulatory requirements.

Assessment for this skill standard must be based on practical performance and supported by evidence that must take place in an operational wastewater treatment environment where preliminary wastewater treatment processes are in use.

Assessment must cover the full range of preliminary wastewater treatment processes relevant to this skill standard that are in use at the candidate's workplace.

Evidence must demonstrate consistent performance over time, not one-off tasks.

Definitions

Candidate's workplace (for assessment purposes) means the operational treatment site(s) nominated by the employer as the workplace for assessment, that includes the full range of processes relevant to this assessment standard and to the candidate's expected duties. Where the employer operates multiple treatment sites, the nominated workplace must not be limited to a site with minimal relevant processes where this would prevent evidence being gathered for the full range of processes relevant to this assessment standard.

Operational requirements refer to the documented and embedded ways of working that govern how activities are planned, performed, monitored, and controlled in the workplace to ensure safe, consistent, and compliant operations.

Water services refer to industries responsible for working on or around water supplies, networks, plants, and systems.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content**Operate and control preliminary treatment processes**

- Purpose and function of preliminary wastewater treatment processes.
- Typical plant and equipment configurations and their suitability.
- Screening, grit removal, and fat/oil/grease (FOG) removal processes.
- Temperature ranges and operational limits.
- Preparation of wastewater for downstream treatment processes.
- Outputs of preliminary treatment processes.
- Legislative and regulatory requirements relevant to operation.

Monitor preliminary processes

- Flow measurement and equalisation.
- Use of stormwater buffers to manage inflow variability.
- Measuring inflow constituents.
- Process tests including removal rates of solids, FOG levels, grit volumes.
- Visual inspections and routine operational checks.
- Interpretation of monitoring results to inform process adjustments.

Maintenance and supporting activities

- Adjustment and verification of plant, instruments, and equipment.
- Routine and corrective maintenance activities.
- Process failure and incident response procedures.
- Disposal requirements for screenings, grit, and grease.
- Completion of process records and reports to meet operational and compliance requirements.

Rauemi | Resources

Legislation, regulations and/or industry standards relevant to this skill standard include, but are not limited to:

- Local Government (Water Services) Act 2024 - [Local Government \(Water Services Preliminary Arrangements\) Act 2024 No 31 \(as at 27 August 2025\), Public Act Part 1 Preliminary provisions – New Zealand Legislation](#).
- National Wastewater Environmental Performance Standards - [Discussion-document-National-wastewater-environmental-performance-standards-FINAL.pdf](#).
- Water Services Act 2021 - [Water Services Act 2021, Public Act Contents – New Zealand Legislation](#).
- Wastewater Standards - [Wastewater standards | The Water Services Authority - Taumata Arowai](#).
- Resource Management Act 1991 - [Acts and Bills | Ministry for the Environment](#).
- Te Mana o te Wai - [Te Mana o te Wai implementation | Ministry for the Environment](#).

- Hazardous Substances and New Organisms Act 1996 - [Hazardous Substances and New Organisms Act 1996 No 30 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#).
- Health and Safety at Work (Hazardous Substances) Regulations 2017 - [Health and Safety at Work \(Hazardous Substances\) Regulations 2017 \(LI 2017/131\) \(as at 20 October 2025\) Contents – New Zealand Legislation](#).

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Energy and Infrastructure Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology > Water Industry > Wastewater Treatment
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0120

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	28 May 2026	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 29955.		
Rā arotake Planned review date	31 December 2032		

Please contact Energy and Infrastructure Industry Skills Board at qualifications@energyinfra-skills.nz if you wish to suggest changes to the content of this skill standard.