

1XXXXX Operate hydrometric stations

Kaupae Level	5
Whiwhinga Credit	15
Whāinga Purpose	<p>People with this skill standard will be able to operate, inspect, maintain, verify and retrieve data from hydrometric stations. Learners who are awarded this standard will develop the skills to assess station performance, carry out repairs, and manage hydrometric data in accordance with NEMS and worksite procedures.</p> <p>This skill standard has been developed to align with the New Zealand Diploma in Field Hydrology (Level 5) [Ref: 2344].</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Describe, inspect and verify hydrometric stations	a. Describe the purpose of hydrometric stations and their role in providing accurate data for hydrological decision-making.
	b. Inspect station infrastructure and instruments, perform reference checks, and compare with recorded data.
2. Perform operational maintenance and repairs on hydrometric stations	a. Conduct regular station servicing in line with manufacturer and worksite procedures.
	b. Perform repairs or coordinate technical support for complex maintenance tasks.
	c. Identify, document, and address or escalate any operational issues, discrepancies, or maintenance requirements.
3. Retrieve and manage hydrometric data	a. Download data directly from loggers or remotely via telemetry and verify completeness.
	b. Store data and metadata.

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

Assessment specifications:

Learners/ākonga' evidence must be collected using naturally occurring evidence.

All activities and evidence must meet the requirements of worksite procedures, accepted industry practice, legislation and any subsequent amendments.

All activities relevant to this standard should reflect ngā kaupapa (the principles) o te Tiriti o Waitangi.

All activities should, as relevant to candidates and/or this standard, reflect the peoples of other cultures, and their world views.

Range

Hydrometric data includes climate, water level and rainfall time series data.

Learners must operate, inspect, and maintain hydrometric stations.

Evidence could include a range of hydrometric stations, loggers, sensors and equipment.

Evidence must include data retrieval and validation from hydrometric sites.

Definitions

Metadata describes data in detail. It has information about how, when, and by whom certain data was collected and the data format.

Worksite procedures refer to the policies and procedures set out in a verbal or written form by the employer or organisation.

Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider industries as examples of best practice.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Inspection, Verifying & Routine Maintenance

- Describe hydrometric station types: rainfall, river level, flow.
- Differentiate reference checks vs logged readings; verify consistency with cross-checks.
- Inspect site security, power supply, sensor function and telemetry.
- Perform routine tasks: sensor calibration, debris clearance, levelling surveys.
- Record inspections, validations, calibrations and track outstanding issues.

Repairs & Component Replacement

- Schedule maintenance per station type and environmental conditions.
- Clean/replace sensors, desiccants, batteries, solar panels and telemetry hardware.
- Troubleshoot field equipment failures using proper equipment and safety procedures.
- Complete maintenance reports on approved templates.

Data Retrieval & Management

- Retrieve data via downloads or telemetry.
- Validate for gaps, spikes and time drift; correct errors.
- Use telemetry software and time-series databases for access and visualisation.
- Apply standard file formats, naming conventions and metadata procedures for traceability.

Rauemi | Resources

Legislation relevant to this skill standard includes but is not limited to:

- NZHS [NZHS | The New Zealand Hydrological Society](#)
- Health and Safety at Work Act 2015 [Health and Safety at Work Act 2015 No 70 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#)
- National Policy Statement for Freshwater Management 2014 [National Policy Statement for Freshwater Management | Ministry for the Environment](#)
- Resource Management Act 1991 [Resource Management Act 1991 No 69 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#)
- Public Works Act 1981 [Public Works Act 1981 No 35 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#)
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020 [Resource Management \(National Environmental Standards for Freshwater\) Regulations 2020 \(LI 2020/174\) \(as at 01 January 2025\) Contents – New Zealand Legislation](#)
- Freshwater Farm Plans [Freshwater farm plans | Ministry for the Environment](#)
- National Environmental Monitoring Standards (NEMS) [National Environmental Monitoring Standards » National Environmental Monitoring Standards \(NEMS\)](#)

and any subsequent amendments or replacements.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Muka Tangata – People Food and Fibre Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Water Industry > Field Hydrology
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0232

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	<type here>	[dd mm yyyy]	[dd mm yyyy]
Arotakenga Review	<type here>	[dd mm yyyy]	[dd mm yyyy]
Kōrero whakakapinga Replacement information	This skill standard will replace Unit standard 28800 Operate and maintain hydrometric stations		
Rā arotake Planned review date	31 December 2030		

Please contact Muka Tangata – People Food and Fibre Workforce Development Council at qualifications@mukatangata.nz to suggest changes to the content of this skill standard.