

41024 Conduct an irrigation system performance assessment

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| Kaupae Level | 4 |
| Whiwhinga Credit | 15 |
| Whāinga Purpose | <p>This skill standard is for people who work in the irrigation industry.</p> <p>People credited with this skill standard will be able to carry out an on-site irrigation system performance assessment.</p> <p>The skill standard has been developed to align with the New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [Ref: 2555].</p> |

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

| Hua o te ako Learning outcomes | Paearu aromatawai Assessment criteria |
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| 1. Carry out pre-start checks. | a. Identify and inspect key components of the system prior to operation looking at condition, functionality and safety readiness. |
| | b. Confirm system is ready to operate, people are briefed on roles, and test conditions are still suitable. |
| | c. Complete documentation of pre-start checks. |
| 2. Complete the system performance assessment. | a. Set up measuring equipment in accordance with approved methods. |
| | b. Measure system parameters using approved methods. |
| 3. Record data and observations from irrigation system performance assessment. | a. Record data received from carrying out the assessment. |
| | b. Note any observations relevant to the assessment that may affect performance, and make recommendations. |

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

Assessment specifications:

Ākonga/learners must be assessed using naturally occurring evidence.

Activities can be assessed against existing, new or modified irrigation systems.

The irrigation system is for an agricultural or horticultural property, sports turf surface, landscape, golf course, or public grounds. All assessment activities and evidence must meet the requirements of accepted industry practice, worksite safety procedures, and any subsequent amendments to legislation.

Providers must give due consideration to embedding ngā kaupapa (principles) o Te Tiriti o Waitangi when designing delivery activities relevant to this standard. These principles are outlined in [Guidelines for Providers: Embedding Tirohanga Māori](#).

Providers must give due consideration to the needs and values of Pacific peoples and other cultural groups when designing delivery activities relevant to this standard, ensuring practices are inclusive and equitable.

Range

Evidence for practical components must be collected from two separate commercial irrigation systems.

Evidence for all outcomes must be presented in accordance with the relevant New Zealand codes of practice and any subsequent amendments available from the Irrigation New Zealand website, <http://irrigationnz.co.nz/>.

Definitions

Accepted industry practice refers to codes of practice and standardised procedures adopted by the irrigation industries as standards for best practice.

System performance assessment is the process of evaluating how effectively a system functions in relation to its intended purpose, objectives, and performance criteria.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

On-site irrigation system performance assessment

- Pre-start checks on system condition, functionality and readiness
- Water meter readings
- Power meter readings
- Headworks components layout
- Filter condition and contaminant assessment
- Sprinkler package installation
- Sprinkler and emitter condition.

System parameter measurement

- Pressure
- Flow rate
- Uniformity assessment
- Components of irrigation system
- Tool and equipment for assessment
- Application efficiency calculations
- Systems issues and faults.

Observation recording methods

- Field notes
- Photographic evidence
- Data accuracy
- Traceability
- Industry compliance.

Rauemi | Resource

Codes of Practice relevant to this skill standard include but are not limited to:

- The New Zealand Piped Irrigation System Performance Assessment Code of Practice
- Irrigation New Zealand Technical Glossary

available from the Irrigation New Zealand website, <http://irrigationnz.co.nz/>.

Legislation relevant to this skill standard includes:

- Site specific water resource consent or water supply agreement, weather data (e.g. Earth Science New Zealand), crop descriptions and soil profile data sheets (e.g. SMap);
- Health and Safety at Work Act 2015;
- Resource Management Act 1991;
- National Policy Statement for Freshwater Management 2020;
- Various Regional Council Land and Water Regulations;
- Resource Management (Freshwater Farm Plans) Regulations 2023;

and any subsequent amendments or replacements.

Pārongo Whakaū Kounga | Quality assurance information

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| Ngā rōpū whakatau-paerewa Standard Setting Body | Muka Tangata – People, Food and Fibre Workforce Development Council |
| Whakaritenga Rārangi Paetae Aromatawai DASS classification | Engineering and Technology > Water Industry > Irrigation |
| Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR | 0052 |

| Hātepe Process | Putanga Version | Rā whakaputa Review Date | Rā whakamutunga mō te aromatawai Last date for assessment |
|--|--|-----------------------------------|--|
| Rēhitatanga Registration | 1 | 18 December 2025 | N/A |
| Kōrero whakakapinga Replacement information | This skill standard and skill standard 41025 replaced unit standard 28925. | | |
| 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.