

1XXXXX**Assess, Interpret and Report on Irrigation System Performance**

Kaupae Level	4
Whiwhinga Credit	15
Whāinga Purpose	<p>This skill standard is for people working in the irrigation industry.</p> <p>People credited with this skill standard will be able to identify and describe irrigation system specifications and key performance indicators (KPIs), interpret the performance results of irrigation systems, and report their findings.</p> <p>This skill standard has been developed to align with the New Zealand Certificate in Irrigation System Performance Assessment. [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
1. Gather and collate irrigation system specifications and KPIs	a. Gather system specifications and KPIs as per system design documentation.
	b. Collate for a report on the system specifications and KPIs.
2. Interpret results of irrigation system performance	a. Review system performance assessment results and compare with specifications and KPIs.
	b. Interpret results and determine potential variations in expected performance.
3. Report findings from irrigation system performance assessment	a. Produce a report detailing data collected and the methodology used.
	b. Provide calculations and compare against design KPIs.
	c. Describe the implications of measured KPIs against design KPIs.
	d. Provide observations (e.g. written and photographic), that support data interpretation.
	e. Provide conclusions and recommendations based on the assessment results.

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

Akōnga/learners - must be assessed using naturally occurring evidence.

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

The irrigation system is for an agricultural or horticultural property, sports turf surface, landscape, golf course, or public grounds. .

All 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 component 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; <https://www.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.

KPIs Key Performance Indicators (KPIs) are the measurable outputs and outcomes used to evaluate an irrigation system's performance against its design, operation objectives, regulatory requirements, or environmental benchmarks.

***Ngā momo whiwhinga* | Grades available**

Achieved

Ihirangi waitohu | Indicative content

Gather and collate irrigation system specifications and KPIs

- Key components and configurations of irrigation systems (e.g. system type, layout, capacity).
- How design parameters affect system performance (e.g. pipe size, emitter spacing, pump specs).
- Common Key Performance Indicators (KPIs): flow rate, pressure, uniformity, application efficiency.
- Relationship between specifications and KPIs: expected vs actual system behaviour.
- Sources of specification data: plans, consent documents, manufacturer specifications, maintenance records.

Interpret results of irrigation system performance

- Methods for conducting system performance assessments: flow testing, pressure readings, uniformity measurements.
- Comparing measured data against system specifications and industry KPIs.
- Identifying performance issues: leaks, uneven distribution, pressure drops, clogging.
- Interpreting deviations: what they indicate about system faults or operational inefficiencies.

Report findings from irrigation system performance assessment

- Structuring a report: introduction, methodology, results, analysis, conclusions.
- Presenting data clearly using tables, graphs, and performance summaries.
- Drawing evidence-based conclusions and making practical, prioritised recommendations.
- Ensuring reports meet industry documentation standards and are suitable for client or stakeholder to use.
- Integrating cultural and regulatory considerations into reporting where relevant.

Rauemi | Resources

- Codes of practice relevant to this skill standard include 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 but is not limited to:

- Site specific water resource consent or water supply agreement, weather data (e.g. Earth Sciences 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

Ngā rōpū whakatau-paerewa Standard Setting Body	Muka Tangata – People Food and Fibre Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	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	<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 28926 Interpret irrigation system performance results against system specifications, and report findings
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.