

**Field      Engineering and Technology****Review and change of standard-setting responsibility of *Water Industry* unit standards**

<b>Subfield</b>	<b>Domain</b>	<b>ID</b>
Water Industry	Drinking-Water Assessment	18440, 18441, 18446, 24907-24909, 24911, 24912
	Water - Generic	17870, 17871, 17874, 19200, 19205, 24904, 24913, 24917
	Water Reticulation	18458, 18459, 19201, 19204, 19207, 19354, 24924, 24925

The Infrastructure Industry Training Organisation has completed the review of the unit standards listed above.

**Date new versions published**

**March 2017**

**Planned review date**

**Month 2021**

**Summary**

Gazetted coverage of the Water Industry, including Water Treatment and Drinking-Water, was transferred to Infrastructure ITO in May 2015. Review of the unit standards had been due, but this and the transfer of responsibility was delayed due to the Targeted Review of Qualifications (TRoQ). The review was conducted in 2016 to align the unit standards with current industry need and to support the New Zealand Certificate in Water Treatment (Small Scale Systems Operator) (Level 3) [Ref: 2240], the New Zealand Certificate in Water Treatment (Drinking-Water/Wastewater) (Level 3) [Ref: 2241], the New Zealand Certificate in Water Treatment (Level 4) with strands in Drinking-Water Treatment, Wastewater Treatment, Drinking-Water Multistage Processes, and Wastewater Multistage Processes [Ref: 2242], the New Zealand Diploma in Water Treatment (Level 5) with strands in Drinking-Water Treatment, and Wastewater Treatment [Ref: 2245], and the New Zealand Diploma in Drinking-Water Assessment (Level 5) [Ref: 2244].

In 2016, Water/Wastewater Treatment, Drinking-Water Assessors, and Water Reticulation Working Groups comprised of industry experts and tertiary providers met to review the structure, levels, credits, and content of the unit standards to update and align with current industry practice. The draft standards were then circulated to wider industry including industry peak bodies, wastewater treatment plant staff, providers, and district and regional councils for further consultation and feedback.

The review took place as part of a larger review of all standards within the *Water Industry* subfield, which included aligning levels and credits to achieve parity between similar skill sets across the industries and to support the qualifications. Some unit standards in *Water Reticulation* had been marked as a priority for review due to age or their inclusion in programmes under development, and were reviewed with this group. The remainder of *Water Reticulation* unit standards were reviewed in December 2016.

## Main changes

- Titles, purpose statements, explanatory notes, outcome statements and evidence requirements were updated to reflect current industry practice and to remove overly-prescriptive range statements or assessment requirements where possible.
- Levels and credits were adjusted to accurately reflect content and to improve consistency across similar skill sets between industries
- Eight new standards were developed to address emerging skills and identified gaps within the current suite.
- One standard will expire and will not be replaced.
- Two standards covering aspects of the same job were designating expiring and replaced by one new standard that is a combination of the two replaced standards.
- One standard was moved from the domain *Water - Generic* to domain *Water Reticulation*.
- One standard was made generic to the wider infrastructure sector, and moved from subfield *Water Industry* domain *Water Reticulation*, to subfield *Infrastructure Works* domain *Generic Infrastructure Works*.
- One standard in the *Drinking-Water Assessment* domain was replaced by a new standard in the *Water Treatment* domain.
- A last date for assessment of superseded versions of the Category B standards was specified. Results will not be accepted where the assessment date is after the last date for assessment of the superseded version of the standard.

## Category C and D unit standards will expire at the end of December 2018

The last date for assessment of superseded versions of Category B unit standards is December 2018

## Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Subfield	Water Industry	6	Standard	19207	3
Domain	Water Reticulation	3-5	Standard	19207	3

## Impact on Consent and Moderation Requirements (CMR)

All standards transferred from CMR 0179 to CMR 0101.

## Impact on registered qualifications

Key to type of impact	
<b>Affected</b>	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
<b>Not materially affected</b>	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following table identifies National qualifications developed by another SSB that are affected by the outcome of this review. The SSB has been advised that the qualification requires revision.

Ref	Qualification Title	ID	SSB Name
1226	National Certificate in Transportation of Waste and Recoverable Resources (Liquid and Hazardous Waste) (Level 3)	19207	MITO

### Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
<b>A</b>	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
<b>B</b>	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
<b>C</b>	Major changes that necessitate the registration of a replacement standard with a new ID
<b>D</b>	Standard will expire and not be replaced

Engineering and Technology > Water Industry > Water reticulation

Engineering and Technology > **Infrastructure Works > Generic Infrastructure Works**

ID	Title	Level	Credit	Review Category
19207	Enter, work in, and exit a confined space in the water industry <b>Work in a confined space in the infrastructure industry</b>	3	5 <b>6</b>	B

Engineering and Technology > Water Industry

ID	Domain	Title	Level	Credit	Review Category
18440	Drinking-Water Assessment	Describe drinking-water standards and the relevant Ministry of Health quality management strategy	4	3	C
<b>29994</b>	<b>Water Treatment</b>	<b>Demonstrate knowledge of the regulatory framework relevant to drinking-water supply</b>	<b>4</b>	<b>5</b>	
19205	Water - Generic	Demonstrate knowledge of pathogens, diseases, and their control in the water industry	3	2	B
	<b>Water Reticulation</b>	<b>Demonstrate knowledge of pathogens, diseases, and their control in water services reticulation</b>		<b>5</b>	

Engineering and Technology > Water Industry > Drinking-Water Assessment

ID	Title	Level	Credit	Review Category
18441	Assess drinking-water suppliers' Public Health Risk Management Plans (PHRMP) for adequacy <b>Assess drinking-water suppliers' Water Safety Plans (WSP) for adequacy</b>	6	8 <b>10</b>	B
18446	Assess competence of drinking-water field analysts	6	5 <b>11</b>	B

ID	Title	Level	Credit	Review Category
24907	Demonstrate knowledge of Public Health Risk Management Plans (PHRMP) and their implementation <b>Demonstrate knowledge of water safety planning</b>	5	4 7	B
24908	Plan and conduct inspections of drinking-water supplies, and verify compliance with PHRMP and DWSNZ <b>Plan and conduct inspections of drinking-water supplies, and verify compliance with WSP and DWSNZ</b>	6 5	8 12	B
24909	Produce a final report on, and communicate, drinking-water supply inspection findings	6 5	3 9	B
24911	Describe and use a Water Information New Zealand (WINZ) database on local drinking-water supplies <b>Describe and use drinking-water websites and databases for drinking-water assessment</b>	4	4 5	B
24912	Prepare a Public Health Risk Management Plan (PHRMP) for a large drinking-water supply <b>Prepare a Water Safety Plan for a surface water supply with multistage treatment and medium-large distribution network</b>	6 5	6 8	B
<b>30001</b>	<b>Demonstrate knowledge of data analysis and quality auditing for drinking-water assessment</b>	4	8	New
<b>30002</b>	<b>Assess catchment risk assessment for a drinking-water supply</b>	5	7	New

## Engineering and Technology &gt; Water Industry &gt; Water - Generic

ID	Title	Level	Credit	Review Category
17870	Carry out safe practices when working in water and wastewater treatment plants	2	2	D
17871	Describe safe practices when working with hazards in water and wastewater treatment plants	3	3 4	B
17874	Demonstrate knowledge of basic science theory relating to water	3	6	B
19200	Demonstrate knowledge of, and apply, mathematics in the water industry	2 3	3 4	B
24904	Describe process control, P and I drawings, and SCADA, for a water or wastewater treatment plant	5	5	B
24913	Describe processes, process control, and monitoring, in a water or wastewater treatment plant	3 4	5	B
24917	Demonstrate knowledge of water and wastewater treatment plants quality management	4	5	B
<b>30004</b>	<b>Manage assets and operational costs for a water or wastewater treatment plant</b>	5	6	New

ID	Title	Level	Credit	Review Category
30005	Monitor and report on assets and describe operational costs for a water or wastewater treatment plant	4	4	New
30006	Manage visitors, contractors, and staff in a water or wastewater treatment plant	5	10	New
30007	Oversee contractors and visitors on a water or wastewater treatment plant site	4	6	New
30008	Demonstrate knowledge of pathogens, diseases, and their control in water treatment	3	5	New

## Engineering and Technology &gt; Water Industry &gt; Water Reticulation

ID	Title	Level	Credit	Review Category
18458	Describe drinking-water supply reticulation systems	5	8	B
18459	Describe drinking-water reticulation system management, and management of critical points <b>Describe drinking-water reticulation system management, and management of critical control points</b>	5	8	B
19201	Demonstrate knowledge of reticulated services and their location, in the water industry	3	4	B
19204	Produce and use as-built plans in the water industry <b>Use as-built plans and produce a field sketch in the water industry</b>	3	2 5	B
19354	Manage drinking-water reticulation systems and critical points <b>Manage drinking-water reticulation systems and critical control points</b>	5	8	B
24924	Shut down and re-commission a drinking-water supply mains	3	4	C
24925	Prepare, install fittings, and charge up a pipe line, and check for leaks and operation, for water reticulation	4	4	C
30003	<b>Prepare, install fittings, and recommission water mains, for water reticulation</b>	4	6	
30009	<b>Describe wastewater reticulation system management, and management of critical control points</b>	5	8	New