

Title	Demonstrate knowledge of the management and use of water at an extractive site		
Level	4	Credits	7

Purpose	People credited with this unit standard are able to demonstrate knowledge of: consent conditions and the water management system for an extractive site; and the operation and maintenance of systems relating to water management at an extractive site.
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Classification	Extractive Industries > Extractive Industries Management
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Available grade	Achieved
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Guidance Information

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

- Health and Safety at Work Act 2015 (HSW);
- Resource Management Act 1991
- Building (Dam Safety) Regulations 2022

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definition

Company procedures mean the documented methods for performing work activities and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.

3 This unit standard is intended for, but is not limited to, workplace assessment.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of consent conditions and the water management system for an extractive site.

Performance criteria

- 1.1 Requirements of the consent conditions in relation to the use of water are explained.
- Range may include but is not limited to – types of water permit, take dam, use divert and discharge, water quantities, water quality at discharge, catchment water runoff, storm water, water uptake, dam hazard rating (potential impact class).
- 1.2 Site surface control, runoff, and diversion management are described in accordance with resource consent.
- Range may include but is not limited to – water tables, sumps, culverts, channels, pumps, settling ponds, pipelines and dams.
- 1.3 The process of treating and discharging wash and surface runoff water is described in accordance with resource consent.
- Range may include but is not limited to – settling ponds, safety fencing, signage, weirs, open channels, treatment plant, pumps, flocculent material, filters, particle settlement, sampling, testing, reporting.
- 1.4 The process of containment, uplifting, and disposal of silt particles and fines is described in accordance with company procedures and resource consent.
- Range may include but is not limited to – tip disposal, landscaping, mixing, spreading, cleaning out settling ponds, dewatering.

Outcome 2

Demonstrate knowledge of the operation and maintenance of systems relating to water management at an extractive site.

Performance criteria

- 2.1 Water system maintenance and cleaning is described in accordance with company procedures.
- Range may include but is not limited to – water tables, sumps, culverts, channels, pumps, settling ponds, drain holes, pipes, valves, dams, bulk heads, spillways, freeboard.
- 2.2 Hazards and risks in relation to the systems for water use are described and methods for their elimination or control are explained in accordance with company procedures.
- Range may include but is not limited to – preparation for extreme weather events, trigger action response plans (TARPs), management plans, principal hazard management plans (PHMPs) (tips, ponds and voids).

2.3 The requirements for monitoring and reporting of water use and the water management system are described in accordance with company procedures.

Range may include but is not limited to – real-time telemetry, pH, turbidity, flowrate, manual sampling

2.4 Documentation related to water use is explained in accordance with company procedures.

2.5 The safety systems relating to water use and water management are described in accordance with company procedures.

Range may include but is not limited to – risk assessments, warning signs, rescue plan, gates and fencing, guarding, alarms, fire fighting, water isolation, power isolation procedures, engineering design, inspections, manual sampling.

Replacement information	This unit standard replaced unit standard 8912.
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Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 January 2005	31 December 2017
Rollover and Revision	2	16 July 2010	31 December 2017
Review	3	18 June 2015	31 December 2019
Review	4	1 March 2018	31 December 2026
Review	5	30 January 2025	N/A

Consent and Moderation Requirements (CMR) reference	0114
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.