

Design a water reticulation system and facility for a commercial aquaculture or holding operation

Level 6

Credits 15

Purpose People credited with this unit standard are able to: establish the site requirements needed to meet the biological demands of the proposed species; establish the operational specifications for a water reticulation system; and design a water reticulation system and facility for a commercial aquaculture or holding operation.

Subfield Seafood

Domain Aquaculture

Status Registered

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Entry information Open.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) Primary Industry Training Organisation

Accreditation and Moderation Action Plan (AMAP) reference 0123

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Special notes

- 1 The water reticulation system and facility designed must be viable within New Zealand.
- 2 Legislation relevant to this unit standard may include but is not limited to – Resource Management Act 1991, Biosecurity Act 1993, and Animal Welfare Act 1999.

Elements and performance criteria

Element 1

Establish the site requirements needed to meet the biological demands of the proposed species for a commercial aquaculture or holding operation.

Performance criteria

- 1.1 The biological demands of the proposed species for a commercial aquaculture or holding operation are defined.
- Range oxygen levels, maximum nitrogen tolerance, tolerance to metals, temperature, salinity, pH.
- 1.2 The site requirements in terms of meeting the commercial demands for farming the species and the conditions of the Resource Consent are established.
- Range may include but are not limited to – biological demands of the species, water supply, site, stock supply, power, staff, market, trades personnel, consumables, access, local risks, pumping heads.

Element 2

Establish the operational specifications for a water reticulation system for a commercial aquaculture or holding operation.

Performance criteria

- 2.1 The production capacity of the proposed species for a commercial aquaculture or holding operation is established.
- 2.2 The maximum operational density of the species is established in terms of health of the species and plant capacity.
- 2.3 The water quality required for the system is established.
- Range intake, discharge.
- 2.4 The plant required to operate the water reticulation system and maintain the required water quality is established and the method of calculations used is explained.
- 2.5 The operational costs at full production capacity are forecast to establish commercial viability.
- Range labour, feed, electricity, seed, interest.

Element 3

Design a water reticulation system and facility for a commercial aquaculture or holding operation.

Performance criteria

- 3.1 The design includes the layout of the facility and meets requirements for biosecurity, maintenance of optimal animal health, and Resource Consent.
- Range may include but is not limited to – reception and dispatch of stock, hatchery, quarantine area, tanks, ponds, equipment, staff facilities, administration facilities.
- 3.2 The design includes the plant required to operate the water reticulation system.
- Range includes but is not limited to – intake, discharge, filtration, ancillary equipment, alarm systems.
- 3.3 The design includes the back-up systems required to operate the water reticulation system in case of system failure.

Please note

Providers must be accredited by the Qualifications Authority, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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Comments on this unit standard

Please contact the Primary Industry Training Organisation sitostandards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.