

<b>Title</b>	<b>Demonstrate knowledge of, and monitor and maintain, reticulated water systems for a seafood live holding facility</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>20</b>

<b>Purpose</b>	<p>This unit standard is for people working in a seafood operation.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of reticulated water systems for a seafood live holding facility; monitor the reticulated water system in a seafood live holding facility; and maintain the reticulated water system in a seafood live holding facility.</p>
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<b>Classification</b>	Seafood > Aquaculture
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 All evidence presented in this unit standard must be in accordance with:
  - Workplace procedures;
  - Animal Products Act 1999;
  - Food Act 2014;
  - Health and Safety at Work Act 2015; and any subsequent amendments.
  
- 2 Definitions
 

*Seafood* includes any species of – fish, echinoderm, crustacean, or shellfish.

*Workplace procedures* refer to the policies and procedures set out in a verbal or written form by the employer or organisation. Procedures must reflect current legislative requirements.

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of reticulated water systems for a seafood live holding facility.

#### Performance criteria

- 1.1 Describe the sequence of events in the operation of the reticulated water system.

Range            flow through, partially recirculated, fully recirculated.

- 1.2 Describe the function and operating principles of the equipment used in a reticulated water system.
- Range may include but is not limited to – pumps, filters, protein skimmers, ultraviolet units, ozone systems, heat exchangers, blowers, biofilters;  
evidence of five is required.
- 1.3 Describe the ways that the reticulation water system is monitored to control water quality.
- Range dissolved oxygen, temperature, pH;  
at least two of – carbon dioxide, ammonia, nitrate, nitrite, total dissolved gases, turbidity, salinity.
- 1.4 Describe the safety procedures to be used during monitoring and maintenance of a reticulated water system.
- Range may include but is not limited to – footwear, clothing, hair restraints and electrical isolation procedures;  
evidence of three is required.

## Outcome 2

Monitor the reticulated water system in a seafood live holding facility.

Range one of – flow through, partially recirculated, fully recirculated.

### Performance criteria

- 2.1 Confirm the pumps are in a safe working order during operation.
- 2.2 Monitor the water flow and adjust as required to meet the needs of the stock being held.
- Range monitoring may include but is not limited to – flow meters, bucket test, dissolved oxygen test.
- 2.3 Monitor the aeration of the circulating water.
- 2.4 Monitor the filters and replace as necessary or arrange for replacement.
- 2.5 Monitor the water quality and report results.
- Range may include but is not limited to – oxygen, temperature, pH, carbon dioxide, ammonia, nitrate, nitrite, total dissolved gases, turbidity, salinity;  
evidence of three is required.

## Outcome 3

Maintain the reticulated water system in a seafood live holding facility.

**Performance criteria**

3.1 Maintain reticulated water system equipment.

Range may include but is not limited to – pumps, filters, protein skimmers, ultraviolet units, ozone systems, heat exchangers, blowers, biofilters;  
evidence of five is required.

3.2 Carry out minor repairs to the reticulated water system.

Range may include but is not limited to – replacing pump valves, cutting and replacing pipes, pigging lines, solvent jointing;  
evidence of three is required.

<b>Planned review date</b>	31 December 2023
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	28 January 2000	31 December 2019
Review	2	25 February 2008	31 December 2019
Review	3	12 December 2008	31 December 2019
Review	4	1 November 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0123
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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 the Primary Industry Training Organisation at [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.