

<b>Title</b>	<b>Demonstrate knowledge of biological wastewater treatment systems in a primary products food processing operation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This unit standard is for people who are responsible for applying environmental practices in their work area, in a primary products food processing operation.</p> <p>People credited with this unit standard are able to explain: biological mechanisms used for treatment of wastewater; principles of design and operation of biological systems used for treatment of wastewater; and biological waste treatment sludge handling and disposal methods, used in a primary products food processing operation.</p>
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<b>Classification</b>	Primary Products Food Processing > Primary Products Food Processing - Operational Skills
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<b>Available grade</b>	Achieved
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### Explanatory notes

- 1 Legislation relevant to this unit standard includes but is not limited to – Hazardous Substances and New Organisms Act 1996, Health and Safety in Employment Act 1992, Health and Safety in Employment Regulations 1995, Resource Management Act 1991.
  - 2 Definitions  
*Organisational requirements* – instructions to staff on policies and procedures which are documented in memo, electronic or manual format and are available in the workplace.  
*Primary products food processing operation* – covers a meat processing, dairy processing, seafood or baking yeasts manufacturing operation.
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### Outcomes and evidence requirements

#### Outcome 1

Explain biological mechanisms used for treatment of wastewater in a primary products food processing operation.

**Evidence requirements**

- 1.1 Biological treatment processes are explained in terms of mechanisms and application.
- 1.2 Growth requirements for sludge microorganisms are explained in terms of a means to ensure optimal growth of desirable micro-organisms.

**Outcome 2**

Explain principles of design and operation of biological systems used for treatment of wastewater in a primary products food processing operation.

**Evidence requirements**

- 2.1 Considerations for selection and configuration of systems for nutrient removal are explained in terms of wastewater characteristics, nutrient removal and discharge requirements.
- 2.2 Operating variables in biological treatment plants are explained in terms of their level of influence for optimal operation.
- 2.3 Operating problems in biological treatment plants are explained in terms of causes and remedies.

**Outcome 3**

Explain biological waste treatment sludge handling and disposal methods used in a primary products food processing operation.

**Evidence requirements**

- 3.1 Characteristics of biological waste treatment sludge are explained in terms of handling and disposal considerations.
- 3.2 Methods used for sludge concentration are explained in terms of their principles of operation and application.
- 3.3 Methods used for sludge disposal are explained in terms of their principles of operation and application.

<b>Replacement information</b>	This unit standard replaced unit standard 19327.
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<b>Planned review date</b>	31 December 2020
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**Last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2015	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0022
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR 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.

**Comments on this unit standard**

Please contact the Primary Industry Training Organisation [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.