

<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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### Guidance Information

- 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.

### Outcomes and performance criteria

#### Outcome 1

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

#### Performance criteria

- 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.

**Performance criteria**

- 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.

**Performance criteria**

- 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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**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2015	31 December 2024
Review	2	24 March 2022	31 December 2024

<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>.

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