

<b>Title</b>	<b>Demonstrate knowledge of irrigation systems used in horticulture</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard is for people working, or intending to work, in horticulture.</p> <p>People credited with this unit standard are able to: describe the importance of irrigation in horticulture production; identify and describe the range of irrigation systems used in New Zealand horticulture; describe a typical irrigation system; and demonstrate knowledge of water sources, water permit regulations and water conservation.</p>
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<b>Classification</b>	Horticulture > Production Horticulture
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<b>Available grade</b>	Achieved
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### Guidance information

- 1 Performance requirements must be consistent with:
  - Resource Management Act 1991.
- 2 Regulations on water permits and water consents should be sought from local authorities.

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### Outcomes and performance criteria

#### Outcome 1

Describe the importance of irrigation in horticulture production.

#### Performance criteria

- 1.1 Describe the importance of plant water requirements for plant growth and plant processes.
- 1.2 Describe seasonal rainfall variation within New Zealand and the importance of water storage.
- 1.3 Describe the effect of over watering on plant growth.
- 1.4 Describe the use of water budgets in terms of how much irrigation should be applied to horticulture crops.

**Outcome 2**

Identify and describe the range of irrigation systems used in New Zealand horticulture.

Range mist, drip, overhead, capillary, hand.

**Performance criteria**

- 2.1 Describe characteristics of each system in terms of how it functions.
- 2.2 Identify an advantage and disadvantage of each system as a horticulture irrigation method.
- 2.3 Identify irrigation systems used in each sector of production horticulture.

Range horticulture sectors may include but are not limited to – amenity, floriculture, fruit, landscape, nursery, vegetable, and viticulture.

**Outcome 3**

Describe a typical irrigation system.

**Performance criteria**

- 3.1 Describe a typical irrigation system layout and purpose of each irrigation feature.

Range water source, pump, filter (two types), water flow valve, water tank, headers, laterals, emitters (three types), joiners.

- 3.2 Describe irrigation system maintenance.

**Outcome 4**

Demonstrate knowledge of water sources, water permit regulations and water conservation.

**Performance criteria**

- 4.1 Identify advantages and disadvantages of each water source.

Range river and stream, city water supply, lake, dam, artesian bore, roof, springs;  
evidence of two advantages and disadvantages for each water source.

- 4.2 Describe water permit regulations in terms of their importance to the environment.

- 4.3 Describe methods of water conservation in terms of how they can apply to horticultural practices.

Range water recycling and water storage.

<b>Replacement information</b>	This unit standard and unit standard 22189 replaced unit standard 779.
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<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	25 July 2006	31 December 2020
Review	2	28 February 2019	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0032
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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 [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.