



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AHCIRG203A Install micro-irrigation systems**

**Release: 1**

## AHCIRG203A Install micro-irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing micro-irrigation systems under routine supervision and defines the standard required to: organise equipment and materials for installation work; set out and prepare site; install and test the irrigation system; monitor effectiveness and environmental impacts of the micro-irrigation system.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in production or amenity horticulture enterprises that operate under limited supervision and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare tools and materials for installation work	<p>1.1. Materials, tools, equipment and machinery are selected according to irrigation design requirements and supervisors instructions.</p> <p>1.2. The site for installation of the micro-irrigation system is identified according to enterprise plans and work procedures.</p> <p>1.3. Parts and equipment delivered to the site are checked according to system drawings and specifications.</p> <p>1.4. Water supply is checked to ensure that it is compatible with system specifications.</p>
2. Set out and prepare site	<p>2.1. Measurement and marking out of irrigation lines is undertaken as directed by supervisor.</p> <p>2.2. Equipment operation and work practices conform to enterprise and legislative Occupational Health and Safety (OHS) requirements.</p> <p>2.3. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures.</p> <p>2.4. OHS hazards are identified, risks assessed and risk controls are implemented.</p> <p>2.5. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures</p>
3. Install irrigation components	<p>3.1. Work is undertaken according to plan and supervisor's instructions.</p> <p>3.2. Components are assembled and connected according to plan, with joints completed and tested.</p> <p>3.3. A clean and safe work area is maintained while installation work is carried out.</p> <p>3.4. Tools are chosen appropriate to the task being undertaken, and used according to guidelines and safe working practices.</p>
4. Complete installation work	<p>4.1. Earthworks are finished off to plan specifications and enterprise work procedures.</p> <p>4.2. The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.3. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. System is flushed and commissioned as directed. 4.5. Operating faults are identified and reported to supervisor and/or corrective actions taken.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- organise equipment and materials for installation work
- set out and prepare site
- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- methods and techniques of micro-irrigation
- components of an micro-irrigation system
- characteristics and operation of joints, valves and sprinkler components
- operation of pumps and water flow rates
- behaviour of water on varying terrain and soil types
- soil moisture testing techniques
- OHS and environmental legislation and enterprise procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise equipment and materials for installation work</li> <li>• set out and prepare site</li> <li>• install and test the irrigation system</li> <li>• monitor effectiveness and environmental impacts of the micro-irrigation system.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Micro-irrigation systems include:	<ul style="list-style-type: none"> <li>• low pressure micro-sprays</li> <li>• drippers.</li> </ul>
Irrigation equipment may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• delivery equipment</li> <li>• system controllers.</li> </ul>
Water supplies may include:	<ul style="list-style-type: none"> <li>• underground</li> <li>• mains</li> <li>• surface storage</li> </ul>

**RANGE STATEMENT**

	including fixtures such as: <ul style="list-style-type: none"> <li>• dams</li> <li>• bores</li> <li>• windmills</li> <li>• tanks</li> <li>• channels.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Irrigation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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