



**Australian Government**

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

# **FDFWGG2004A Undertake irrigation systems maintenance activities**

**Release: 2**

## **FDFWGG2004A Undertake irrigation systems maintenance activities**

### **Modification History**

This unit supersedes and is equivalent to FDFWGGISMB Undertake irrigation systems maintenance activities.

April 2012: Minor typographical corrections.

### **Unit Descriptor**

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to perform routine maintenance of vineyard irrigation systems under supervision.
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### **Application of the Unit**

<b>Application of the unit</b>	This unit applies to wine grape growing and covers the maintenance of the vineyard irrigation systems. It includes fault reporting, cleaning and routine preventative maintenance.
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### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

## Employability Skills Information

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

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Inspect irrigation system	1.1 Irrigation system is checked for faults and anomalies 1.2 Faults and anomalies are recognised, rectified and/or reported
2. Maintain irrigation system	2.1 Cleaning and maintenance materials are prepared as required 2.2 Irrigation system is cleaned according to instructions 2.3 Routine preventive maintenance is carried out according to instructions 2.4 Waste generated by both the cleaning and maintenance procedures is monitored, collected, treated, disposed of or recycled according to workplace procedures 2.5 Work is conducted in accordance with workplace environmental guidelines
3. Record information	3.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

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

### Required skills include:

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify irrigation system maintenance requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- interpret readings on gauges and meters
- recognise performance problems with the irrigation system and correct or report them as instructed
- identify different components of the irrigation system
- use basic hand tools
- prepare cleaning materials as required
- clean the irrigation system according to instructions. This may include:
  - chemical injection (e.g. chlorine)
  - manual cleaning (e.g. brushes)
  - flushing end points
  - cleaning filters
- use appropriate cleaning techniques
- prepare maintenance materials as required
- conduct routine preventive maintenance of the irrigation system according to instructions. This may include:
  - replacing faulty components and seals
  - maintaining banks or channels
- collect, sort, treat and dispose of, or recycle waste
- identify, rectify and/or report environmental non-compliance
- clean and store equipment according to instructions
- maintain work area to meet housekeeping standards
- record workplace information as instructed
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

### Required knowledge includes:

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Knowledge of:

- purpose, features and components of the irrigation system
- common faults, problems and anomalies and how to solve them
- safe handling of hand tools and maintenance equipment
- maintenance requirements and methods of the irrigation system
- purpose and application of personal protective clothing and/or equipment
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- procedures and responsibility for reporting problems and anomalies
- cleaning and storage requirements of equipment and materials
- workplace recording requirements and 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.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• recognise components of the irrigation system</li> <li>• check irrigation system for correct operation</li> <li>• rectify blocks, breaks, leaks and other minor faults</li> <li>• identify and report major faults</li> <li>• carry out routine preventative maintenance correctly</li> <li>• undertake cleaning of system according to instructions and OHS procedures</li> <li>• remove and treat or dispose of waste according to procedures.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required.</li> </ul>
Method of assessment	This unit should be assessed together with core units and other units of competency relevant to the function or

<b>EVIDENCE GUIDE</b>	
	work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Components</b>	<p>Components of the irrigation system may include:</p> <ul style="list-style-type: none"> <li>• drippers</li> <li>• joiners</li> <li>• pipelines</li> <li>• sprinklers</li> <li>• filters</li> <li>• microjets</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• pumps</li> <li>• furrows</li> <li>• valves</li> </ul>
<b>Faults</b>	<p>Minor faults may include:</p> <ul style="list-style-type: none"> <li>• blocks</li> <li>• breaks</li> <li>• leaks</li> </ul>
<b>Maintenance</b>	<p>Routine preventive maintenance includes:</p> <ul style="list-style-type: none"> <li>• cleaning filters</li> <li>• flushing lines</li> <li>• replacing components</li> </ul>
<b>Tools</b>	<p>Basic hand tools may include:</p> <ul style="list-style-type: none"> <li>• screwdriver</li> <li>• shifters</li> <li>• dripper hole punchers</li> <li>• pressure gauges</li> <li>• snips and pliers</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• cleaning chemical</li> <li>• tape</li> <li>• glue</li> <li>• wire</li> <li>• spare parts</li> </ul>
<b>Irrigation systems</b>	<p>Irrigation systems may include:</p> <ul style="list-style-type: none"> <li>• flood</li> <li>• dripper</li> <li>• overhead</li> <li>• water winch</li> </ul>
<b>Work hazards</b>	<p>Work may involve exposure to:</p> <ul style="list-style-type: none"> <li>• chemical, dangerous or hazardous substances</li> </ul>



**Unit Sector(s)**

<b>Unit sector</b>	Wine operations
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