



**Australian Government**

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

# **AHCIRG405A Plan and coordinate gravity-fed irrigation systems**

**Release: 1**

## AHCIRG405A Plan and coordinate gravity-fed irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and coordinating gravity-fed irrigation systems and defines the standard required to: operate gravity fed irrigation systems; apply enterprise monitoring procedures and identify adverse environmental impacts; brief, monitor and direct work crews; coordinate a range of activities and procedures for effective and efficient water use.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to installers who plan and coordinate gravity-fed irrigation systems for an allocated set of fields and are responsible for monitoring and directing work crews.
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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>

ELEMENT	PERFORMANCE CRITERIA
1. Plan irrigation activities	1.1. Work crews are briefed to carry out the required gravity fed irrigation activities in accordance with enterprise, environmental and Occupational Health and Safety (OHS) requirements. 1.2. Sufficient irrigation equipment is checked and available for the allocated fields to be irrigated. 1.3. Water availability is checked. 1.4. Pumps, bores and other water delivery mechanisms are checked for serviceability. 1.5. Irrigation sequence is determined.
2. Coordinate irrigation activities	2.1. Crew activities are monitored for efficient team work, and direction provided as necessary. 2.2. Water levels in ditches and channels are monitored and maintained to provide sufficient head. 2.3. Pumps and other mechanical equipment are monitored and operating problems identified and corrected as necessary.
3. Record irrigation activities	3.1. Personnel hours and activities are recorded in accordance with enterprise practice. 3.2. Irrigation start and finish times are recorded in accordance with enterprise practice. 3.3. Water storage levels are recorded in accordance with enterprise practice. 3.4. Monitoring activities and data are recorded in accordance with enterprise practice. 3.5. Recommendations for service and maintenance activities are recorded in accordance with enterprise practice.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- identify hazards and monitor safe systems of work
- operate gravity fed irrigation systems
- apply enterprise monitoring procedures

**REQUIRED SKILLS AND KNOWLEDGE**

- brief, monitor and direct work crews
- identify adverse environmental impacts of irrigation activities and take appropriate remedial action
- coordinate a range of activities and procedures
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- soil/plant/water relationships
- environmental impacts of irrigation using water from any ground or underground source
- irrigation system components
- common operational problems
- OHS and environmental legislation, codes of practice 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>• operate gravity fed irrigation systems,</li> <li>• apply enterprise monitoring procedures and identify adverse environmental impacts</li> <li>• brief, monitor and direct work crews</li> <li>• coordinate a range of activities and procedures for effective and efficient water use.</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.	
Surface irrigation systems may include:	<ul style="list-style-type: none"> <li>• border check</li> <li>• contour irrigation</li> <li>• furrow irrigation</li> <li>• hillside flooding</li> <li>• basin irrigation.</li> </ul>
Gravity fed systems may include:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

**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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