



Australian Government

AHCIRG336 Operate and maintain gravity fed irrigation systems

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to operate and maintain gravity fed irrigation systems.

The unit applies to individuals who operate and maintain gravity fed irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for gravity fed irrigation system operation and maintenance	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select and use required materials, tools, equipment and machinery, and check for safe operation 1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task
2. Operate pumps and	2.1 Prime pumps and open or close valves and controls

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
delivery mechanisms	<p>2.2 Position and set up pipes, system equipment and outlets</p> <p>2.3 Set and operate delivery mechanisms</p> <p>2.4 Implement start-up sequence and slowly build up water levels and pressure</p> <p>2.5 Check pressure at the head-works and control valves</p> <p>2.6 Distribute water evenly to the targeted areas with minimal wastage and run-off</p> <p>2.7 Irrigate area and observe time lag between shutdown and end of watering to minimise run-off and deep percolation</p>
3. Monitor drainage and tail-water systems	<p>3.1 Monitor water intake, conveyance and distribution, drainage and tail-water</p> <p>3.2 Check water reuse systems for clearance and freedom from weeds</p> <p>3.3 Monitor pumps, if used, during operation, clear rubbish from outlets and backflush pump</p>
4. Inspect gravity fed irrigation system	<p>4.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected</p> <p>4.2 Record and report damaged or faulty pumps, valves, electrical components and computer control systems, and take action to effect repairs</p>
5. Maintain gravity fed irrigation system	<p>5.1 Service water measuring, diversion and conveyancing, and distribution structures</p> <p>5.2 Carry out vegetation control to keep all system components clear</p> <p>5.3 Service and repair machinery according to operation and maintenance manual</p>
6. Record and report maintenance activities	<p>6.1 Record machinery service and repair according to operation and maintenance manual</p> <p>6.2 Collect, treat and dispose of or recycle waste according to industry procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Complete workplace records legibly and accurately using correct technical terminology
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to communicate damage and blockages
Numeracy skills	<ul style="list-style-type: none"> Measure water levels Calculate water flow rates and water usage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about system damage and blockages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG336 Operate and maintain gravity fed irrigation systems	AHCIRG334 Operate and maintain gravity fed irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>