



Australian Government

AHCIRG220 Assist with surface irrigation operations

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 assist with installing, operating and maintaining surface irrigation systems.

The unit applies to individuals who assist with surface irrigation operations under general supervision with limited autonomy and accountability.

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. Plan and prepare for work	1.1 Read work instructions and confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others 1.2 Select appropriate tools and equipment for the task 1.3 Select, fit and use personal protective equipment and clothing applicable to the task 1.4 Identify site for installation of the irrigation system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Set up field for surface irrigation systems as directed	2.1 Check irrigation gates, channels and ditch-ends 2.2 Check pumps, bores and other water delivery mechanisms for correct irrigation set up 2.3 Position and secure tarpaulins or other water control devices as directed
3. Carry out routine maintenance activities on irrigation delivery systems as directed	3.1 Assist with mechanical equipment servicing according to supervisor instructions 3.2 Flush and clean supply and distribution system as directed 3.3 Maintain system inlets, outlets, structures and fittings 3.4 Check system is running smoothly and is free of damage, leaks and blockages in channels, drains and outlets 3.5 Clean irrigation system and ensure there is no disruption to the system
4. Undertake surface irrigation work as directed	4.1 Open and shut gates and valves 4.2 Ensure required head and water levels in head ditch are achieved and maintained to ensure sufficient water flow and availability to crops 4.3 Start or open the required number of siphons 4.4 Monitor progress of water flow in furrows 4.5 Lift siphons where irrigation is complete 4.6 Carry out irrigation change and mark 4.7 Use mechanical equipment to build and repair banks and for weed removal 4.8 Move irrigation equipment according to supervisor instructions
5. Record and report maintenance activities	5.1 Record damage and blockage caused by weeds by damage type, location and the section of the system affected 5.2 Record and report damaged or faulty pumps, valves, electrical components and computer systems 5.3 Record and report routine maintenance activities

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	Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	Use clear language to confirm work activity and report irrigation system damage, faulty equipment, blockages and routine maintenance activity
Numeracy skills	Identify irrigation system component part numbers
Navigate the world of work	Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG220 Assist with surface irrigation operations	AHCIRG216 Assist with surface irrigation operations	Performance criteria clarified Foundation skills added Assessment requirements updated	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>

Assessment Requirements for AHCIRG220 Assist with surface irrigation operations

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has assisted with surface irrigation operations on at least one occasion and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- carried out surface irrigation operating tasks as directed
- checked siphons for even water flow
- looked for uneven water distribution or drainage
- opened and closed check valves
- monitored required head and water levels in head ditch
- started and lifted siphons
- used mechanical equipment to build and repair banks and for weed removal
- recorded and reported maintenance activities and faults.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with surface irrigation operations
- principles and practices of surface irrigation
- channels, furrows, borders, fittings and outlets
- system cleaning procedures
- identification, characteristics and operation of surface irrigation structures and components
- damage and problems that occur with gravity-fed irrigation systems
- weed types encountered in gravity fed irrigation systems and their removal
- system malfunctions and their likely causes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - surface irrigation system maintenance tools and equipment
 - personal protective equipment applicable to assisting with surface irrigation operations
- specifications:
 - workplace requirements applicable to health and safety in the workplace and assisting with surface irrigation operations
 - work instructions and workplace procedures applicable to assisting with surface irrigation operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

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