



Australian Government

AHCWAT502 Manage water systems

Release: 1

AHCWAT502 Manage water systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to strategically manage integrated systems involving relationships between irrigation, drainage and environmental systems.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

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

Pre-requisite Unit

Nil.

Unit Sector

Water (WAT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine the feasibility of using or up-grading irrigation system	1.1 Assess water resources and drainage implications to determine suitability for irrigation 1.2 Determine water quality and treatment requirements 1.3 Determine water requirements and most suitable application systems for each crop and plant type and area, and for each soil type

Element	Performance criteria
	1.4 Determine other water requirements, such as climate control 1.5 Assess soil types to determine suitability for irrigation and the range of crop and plant types that could be grown 1.6 Determine drainage requirements in relation to each soil and crop and plant type and type of irrigation system 1.7 Assess performance data, audit reports, environmental and workplace health and safety data for existing systems 1.8 Obtain information from irrigation specialists on all relevant aspects of irrigation design 1.8 Assess and cost available irrigation system types and components and make a decision on the particular system to be used or upgrades to existing system
2. Install or modify an irrigation and drainage system as necessary	2.1 Determine and acquire materials and equipment making up the system 2.2 Install irrigation system using advice, as necessary, from irrigation specialists 2.3 Check that irrigation and drainage systems are supervised to ensure there are no leaks or blockages 2.4 Confirm that the water is being evenly distributed and that the drainage is effective and the system is in good working order
3. Evaluate irrigation system performance	3.1 Determine and value plant growth and yield increases from irrigation 3.2 Calculate the cost of irrigation 3.3 Determine the cost benefit of irrigation and compare with alternative systems and approaches

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWAT502A Manage water systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT502 Manage water systems

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Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- analyse performance and audit data
- develop and implement enterprise work health and safety and environmental procedures
- evaluate irrigation system performance
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- strategically manage irrigated production systems

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of water systems management
 - cost or benefit analysis
 - enterprise policies and procedures
 - environmental impacts of irrigation, using water from any ground or underground source
 - plant requirements
 - water quality

Assessment Conditions

Assessors must satisfy current standards for RTOs.

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