



Australian Government

AHCIRG504 Develop an irrigation and drainage management plan

Release: 1

AHCIRG504 Develop an irrigation and drainage management plan

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop an irrigation and drainage management plan.

It applies to individuals who analyse information and exercise judgement to complete a range of 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

Irrigation (IRG)

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. Compile property background information	1.1 Identify ownership details 1.2 Compile irrigation history 1.3 Identify locality and property details 1.4 Identify agreements and easements with surrounding properties 1.5 Develop property maps to illustrate locality and property boundaries

Element	Performance criteria
2. Compile information on infrastructure and topography	2.1 Define significant topographical and infrastructure features 2.2 Identify opportunities and strengths of the property 2.3 Identify limitations and weaknesses of the property 2.4 Identify local planning issues that may affect the irrigation development 2.5 Develop a map overlay to illustrate topography and infrastructure
3. Compile information on natural resources	3.1 Gather soil survey information 3.2 Identify strategies to minimise and reduce soil erosion, and physical and chemical soil deterioration 3.3 Identify water source availability and quality 3.4 Identify ground water depth and salinity issues 3.5 Define climatic characteristics 3.6 Develop a map overlay to illustrate natural resource features
4. Compile information on enterprise cropping and planting	4.1 Define the suitability of soils and water quality for crops and plants 4.2 Identify any special irrigation requirements of crops and plants 4.3 Develop monthly and annual water budgets for each crop and plant program 4.4 Identify current yields and compare with benchmark crop yields 4.5 Establish targets with consideration for any factors which would limit optimum production 4.6 Define intended crop rotations 4.7 Develop a map overlay to illustrate crop and plant detail
5. Compile information on existing irrigation and drainage system where used	5.1 Evaluate current system performance 5.2 Compare current system performance to benchmark performance parameters 5.3 Develop scheduling procedures 5.4 Define drainage management performance including environmental authority compliance issues 5.5 Identify areas for improvement in system management and structure 5.6 Develop a map overlay to illustrate irrigation system layout
6. Develop an irrigation and drainage management plan with specifications for new or up-graded irrigation and drainage system	6.1 Summarise performance requirements for distribution, treatment and drainage systems 6.2 List new or replacement components 6.3 Develop a development timetable 6.4 Define proposed scheduling system 6.5 Define performance monitoring procedures and work health and safety requirements

Element	Performance criteria
	6.6 Define drainage management processes 6.7 Develop a map overlay to illustrate proposed irrigation and drainage development

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 AHCIRG504A Develop an irrigation and drainage management plan.

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 AHCIRG504 Develop an irrigation and drainage management plan

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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:

- compile and analyse complex information
- develop and implement relevant work health and safety and environmental procedures
- develop plans and reports
- identify adverse environmental impacts of irrigation system activities and recommend appropriate remedial action
- interpret statistical data and measurements
- use a range of irrigation and information management software

Knowledge Evidence

The candidate must demonstrate knowledge of:

- computerised irrigation systems
- enterprise policies and procedures
- environmental impacts of irrigation systems using water from any ground or underground source
- irrigation system options
- measuring and monitoring procedures
- methods and techniques of irrigation
- readily available water
- soil, plant and water relationships
- water table and salinity

Assessment Conditions

Assessors must satisfy current standards for RTOs.

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