



Australian Government

Department of Education, Employment and Workplace Relations

DEFCA313B Prepare and operate a field water-point

Release: 1

DEFCA313B Prepare and operate a field water-point

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to locate ***suitable water sources***, select a suitable work site, operate and maintain a ***field water-point***, and refurbish the site.

The individual will usually be engaged in this activity by leading a team and working autonomously.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s	BCG1004A Carry out measurements and calculations
	BCG1006A Use small plant and equipment
	BCG1011A Handle construction materials and safely dispose of waste
	BSBCMN311A Maintain workplace safety
	DEFCA303B Assist in the preparation, construction, operation and maintenance of a field water-point

Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare and plan for water acquisition

- 1.1 Requirement is received, understood and confirmed with higher authority as necessary
- 1.2 Resource availability and serviceability is identified and constraints are determined
- 1.3 An analysis of the area is conducted from available data to identify potential water sources
- 1.4 **Site surveys**, risk and environmental assessments are conducted
- 1.5 Plan is developed in accordance with survey, water quality and quantity, resources, risks and environmental considerations
- 1.6 Problems that cannot be resolved locally are referred to higher authority for resolution
- 1.7 Competence of team members is confirmed and monitored
- 1.8 Team is briefed in accordance with **standard procedures**
- 1.9 Liaison with outside agencies is undertaken as required
- 1.10 Occupational health and safety (OH&S) requirements and recognised safety precautions are applied throughout the operation in accordance with standard procedures

2. Construct a field water-point

- 2.1 Team is directed and supervised in accordance with plan
- 2.2 Support from outside agencies is organised and directed
- 2.3 **Local utility assets** are located and marked to prevent damage
- 2.4 Routes in and out of water-points are established
- 2.5 **Structures** are designed and constructed/established
- 2.6 Technical advice is provided to the chain of command and/or support agencies
- 2.7 All unexpected situations that require a quick and decisive response are recognised and responded to in accordance with operational requirements and standard procedures

3. Operate and maintain a field water-point

- 3.1 **Potable water** is produced, stored and distributed in accordance with standard procedures

4. Refurbish site and finalise activity

- 3.2 Water-point team is ***supervised***
- 3.3 All unexpected situations that require a response are recognised and responded to in accordance with operational requirements and standard procedures
- 3.4 Reports and data are provided to higher authority in accordance with standard procedures
- 4.1 Site is refurbished in accordance with environmental requirements
- 4.2 Chemicals and waste are disposed of in accordance with environmental requirements and standard procedures
- 4.3 Equipment, tools and materials are recovered, cleaned and maintained
- 4.4 Equipment, tools and materials are either stored or redeployed to another site in accordance with standard procedures
- 4.5 ***Documentation*** is completed in accordance with standard procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- analyse instructions
- command and control skills
- conduct and quality assure water analysis
- conduct risk assessment
- conduct tactical and technical reconnaissance - water-point
- design and prepare chemical storage
- liaison skills
- manage fuel/chemical spill containment
- manage the storage of water
- prepare and issue instructions and orders
- provide advice
- select and maintain routes
- supervise the construction of improvised water towers
- use MSDS

Required Knowledge

- design and construction requirements of improvised water towers
- environmental compliance certificate
- environmental considerations:
- chemical storage/MSDS
- fuel/chemical spill containment
- legal responsibilities
- pathology report of water samples
- relevant legislation and procedures in relation to environmental requirements
- relevant OH&S regulations/requirements, equipment, material and personal safety requirements
- requirements of a technical reconnaissance of a water-point
- water analysis and storage requirements

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to prepare and operate a field water-point within three days.

Assessment must also confirm the ability to communicate effectively with team personnel and outside agencies, and to monitor water quality and quantity.

Consistency in performance

Competency should be demonstrated over a time frame that allows the individual to be observed in all aspects of the operation. A typical time frame would be three days.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed under field conditions.

Specific resources for assessment

Access to:

- field water-point equipment and accessories relevant to the task
- team
- hand tools, power tools, plant and other equipment appropriate to the supply of water
- suitable water supply
- field water-point site
- pathology report of water samples.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Suitable water sources may include

Bores
Canals
Dams
Existing piped supplies
Lakes
Oceans
Rivers
Springs

Field water-point may include

Access roads
Accommodation
Chemicals
Communications equipment
Drainage
Filling points
Fuel
Generator and lighting
Hardstanding
Pumps and pipes
Signage
Storage facilities
Testing facilities - field and laboratory (pathology)
Water desalination equipment
Water purification equipment

Site survey may include

Access
Access to local resources
Availability of storage
Collecting and testing water samples

RANGE STATEMENT

	Ease of distribution
	Security of site
	Site diagram
	Site reference points
	Water flow rates
	Water quality
	Volume of water (yield)
Standard procedures may include	Australian Standards
	Job guides, pamphlets and other publications
	Manufacturers' handbooks, industry specifications and technical instructions
	Material safety data sheets (MSDS)
	OH&S regulations
	Organisational policies and procedures
	Relevant local government by-laws
	Relevant state/territory or federal legislation or regulations
	Water quality requirements
	Written and verbal orders and job instructions
Local utility assets may include	Electricity
	Gas pipelines
	Water
Structures may include	Storage tanks
	Water towers
Potable water is clear of	Bacterial levels that are within medical standards
	Colour
	Odour
	Poisons
	Plant algae
	PH in accordance with OH&S standards
	Salinity
	Turbidity

RANGE STATEMENT**Supervising a water-point team includes**

Accurately recording relevant information
Calibrating, servicing, operating and maintaining water treatment and testing equipment
Collecting and testing water samples
Completing maintenance activities in accordance with standard procedures
Storing, handling and applying chemicals in accordance with OH&S requirements and standard procedures

Documentation may include

Construction documentation
Distribution records
Environmental compliance
Equipment documentation
Maintenance records
Water testing records

Unit Sector(s)

Not applicable.

Corequisite Unit/s**Co-requisite Unit/s**

Nil