



Australian Government

DEFSUR010 Locate, treat and manage water in a survival situation

Release: 1

DEFSUR010 Locate, treat and manage water in a survival situation

Modification History

Release	Comments
1	This unit was released in DEF Defence Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to DEFSU010B Locate, treat and manage water in a survival situation. • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice • PC 2.1, 2.2 and 2.3 revised

Application

This unit describes the skills required to locate, treat (for human consumption) and manage water in a survival situation. This unit also includes extracting water directly through evaporation, transpiration and desalination; filtering techniques; and treating foul water to render it potable. Of equal importance to optimising the input of water, is minimising the expenditure of water. Individuals will need to protect and ration their water assets and to implement measures to minimise water loss to increase their chances of survival.

This unit was developed for Defence personnel but may be relevant to others.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would act autonomously, while performing concrete tasks, in a broad range of contexts which may be highly unpredictable.

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

Competency Field

Survival

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Locate and extract water	1.1 Discover water by recognising and investigating the likely locations and the indicators of water. 1.2 Collect water during periods of rain and high atmospheric moisture content. 1.3 Extract water from the ground through evaporation. 1.4 Extract water from vegetation using transpiration.
2. Prepare water for consumption	2.1 Filter water (i.e. clarify content, remove debris and large contaminants) using improvised filtration methods. 2.2 Make water safe for drinking using improvised desalinator system, including boiler (i.e. drum), collector (i.e. bag) and condenser (i.e. tube/pipe). 2.3 Taste and smell water to confirm it is safe for drinking.
3. Manage water resources	3.1 Store water using improvised storage receptacles. 3.2 Minimise loss of water by implementing water loss reduction management techniques. 3.3 Ration water in accordance with minimum daily requirements as per the survival situation.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning N/A					Reading N/A					Writing N/A					Oral communication N/A					Numeracy N/A				

Performance variables

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to DEFSU010B Locate, treat and manage water in a survival situation.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Companion Volume implementation guides are found in VETNet -

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Assessment Requirements for DEFSUR010 Locate, treat and manage water in a survival situation

Modification History

Release	Comments
1	These Assessment Requirements were released in DEF Defence Training Package release 1.0 and meet the Standards for Training Packages. Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- assembling basic improvised equipment
- demonstrating extreme care in handling critical survival items
- extracting water through:
 - evaporation – a minimum of 20 millilitres of water in 24 hours through the use of a desert still
 - transpiration – a minimum of 200 millilitres of water in a solar day using a plastic (transpirator) bag (0.6 metres by 0.4 metres)
 - desalination – a minimum of five litres of potable water in 24 hours using the following:
 - a ten litre metal drum
 - plastic (transpirator) bag (0.6 metres by 0.4 metres)
 - pipe section (ten to twenty centimetres)

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- desalinator construction including:
 - drum
 - condensing tube
 - collecting device

- connections of the following to each other
- cooling options for the condensing device
- desalinators non-compliant liquids
- transpirator non-compliant vegetation

Assessment Conditions

Competency must be assessed with access to improvised desalinator kits, the desalinator is to provide the only source of water for a minimum of two days unless safety/health reasons require additional supplementation. Competency must be demonstrated once in the evaporation and transpiration of water and competency must be demonstrated in the desalination and management of water, and minimisation of water loss, over a minimum of two days.

Consideration must be given to holistic assessment with other survival units.

While a person can demonstrate the technical ability to locate and treat water, the aspect of longer-term survival, i.e. management of water (including care of the desalinator), is crucial.

Assessment under simulated survival conditions includes:

- food restrictions
- absence of normal living conditions and amenities
- significant period of time

Refer to advice in the companion volumes.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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