



Australian Government

PUAOPE009 Navigate in an aquatic environment

Release: 1

PUAOPE009 Navigate in an aquatic environment

Modification History

Release 1. This is the first release of this unit of competency in the Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to navigate a vessel in an aquatic environment including inland rivers, lakes, dams, surf zones and oceans, using a range of navigation equipment and techniques, while undertaking a search and rescue.

It includes determining current location, destination and resources; determining and planning a safe route or course; navigating to a destination; returning to home port and completing post navigational activities.

The unit is applicable in a range of open or closed water situations where a vessel of varying sizes is required to navigate. It typically applies to personnel from emergency services, volunteer organisations and/or organisations where surveillance and rescue operations in an open or closed water environment is required.

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

Pre-requisite Unit

Not applicable

Competency Field

Operations

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Determine current

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Incident location and task information are obtained from

location, destination and resources		vessel in distress or organisational base station
	1.2	Maps, charts, electronic navigation aids and equipment are prepared and made ready for use
	1.3	Drift, leeway and tidal influences are identified and recorded on charts
	1.4	Current location and estimated destination of vessel in distress are plotted on a chart using coastal navigational techniques within accepted tolerances
2 Determine and plan a safe route or course	2.1	Operational plan is compiled including intercept and rendezvous chart work
	2.2	All plots are recorded on a chart allowing for variables and weather conditions, in accordance with organisational operating procedures
	2.3	Rescue vessel's speed in sea and weather conditions is estimated and allowances are made to provide for an estimated time of arrival
	2.4	Hazards en-route to the incident are researched to determine a safe route or course
3 Navigate to destination	3.1	Route or course is checked, monitored and maintained using navigational aids and with alternates plotted, if required
	3.2	Helmsman is instructed to follow planned route or course and crew look outs are instructed to report any sightings including other marine traffic
	3.3	Regular position fixes are undertaken to determine rescue vessel's position relative to planned route
	3.4	Search and rescue patterns are initiated within incident area where distressed vessel or survivors are believed to be located
	3.5	En-route and arrival position reporting information is communicated to organisational base station
4 Return to home port	4.1	Course or route to return to home port with distressed vessel in tow or with survivors aboard is set, on resolution of the incident
	4.2	Navigational techniques are used to ensure a safe and

timely return to home or alternate port, as instructed by state and/or territory authorities

5 Complete post navigational activities

- 5.1** Navigation reports are completed, in accordance with organisational procedures
- 5.2** Navigational equipment is recovered, reset, updated and serviced, in accordance with operational procedures and manufacturers' specifications

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAOPE009C Navigate in an aquatic environment.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOPE009 Navigate in an aquatic environment

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- completing post navigational activities
- determining and planning a safe route or course using maps and charts
- determining current location, destination and resources
- following organisational policies and procedures
- identifying different types of vessels
- identifying hazards
- interpreting cartographic symbology including contour lines, scale, magnetic variation information
- maintaining accuracy within accepted tolerances when following a route
- maintaining positional awareness
- making maps and charts ready for use
- navigating to destination
- observing situational environment including scanning and picking up on physical cues
- operating radio, intercom, vessel, chart plotter, Global Positioning System (GPS), radar, Radio Direction Finder (RDF) and satellite telephones
- plotting a navigation route
- preparing reports including situational reports (SITREPS)
- reacting to changes in operating environment necessitating replanning a route or course
- returning to home port
- using a variety of communication methods and techniques
- using navigation aids and equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- accepted tolerances

- calculations required for navigation cartographic information including making and using charts
- chart features and symbols
- coastal navigation techniques
- latitude and longitude plotting
- map and chart types
- methods for determining current position
- organisational documentation, policies and procedures
- potential hazards
- report requirements
- route and course planning techniques
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations including
 - a variety of aquatic conditions and/or environments, weather and visibility conditions including adverse and the use of electronic navigational aids
- relevant and appropriate materials, tools, equipment and personal protective clothing and equipment currently used in industry including
 - communications room
 - equipment used in operational navigation is essential
 - Global Positioning System (GPS) chart plotters
 - operations centre with trained staff
 - rescue vessel fitted with radar
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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