



Australian Government

Department of Education, Employment and Workplace Relations

SISOOPS303A Interpret weather for marine environments

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to collect information from a weather map, make forecasts, and record and interpret weather and environmental information in a specific maritime location in order to apply this to the conduct of an aquatic activity at that location.

Application of the Unit

This unit applies to those working autonomously and with supervisory roles in various marine environments.

This may include outdoor recreation leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.

Licensing/Regulatory Information

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Interpret information from a weather map.

- 1.1. Identify characteristics of *map types* and their different uses.
- 1.2. Identify differences between general forecasts and forecasts for marine environments.
- 1.3. Identify weather map *symbols* and associated weather *conditions*.
- 1.4. Outline and justify a weather prediction over a multi-day period for a specific marine region using *information* gained from weather maps and forecasts.

2. Collect, record and interpret weather conditions in a specific marine region.

- 2.1. Identify major *cloud types* and altitude level.
- 2.2. Collect weather and environmental information at regular intervals for a specific area over a multi-day period.
- 2.3. Record weather *data* and identify *patterns*.
- 2.4. Compare and identify the differences between current weather conditions and a current weather forecast.
- 2.5. Determine the possible effects of *landforms* on marine weather conditions.
- 2.6. Identify and explain season variations in weather patterns for a specific marine area.
- 2.7. Outline differences between large scale and localised weather conditions for a specific marine area.

3. Interpret weather and environmental information for aquatic activities at a specific marine location.

- 3.1. Determine the suitability and *limitations* of the activity in relation to the current local weather conditions and forecast.
- 3.2. Identify strategies to ensure the safety and well-being of individuals and or group in weather conditions according to *relevant legislation* and *organisational policies and procedures*.

ELEMENT**PERFORMANCE CRITERIA**

- 3.3. Identify the weather conditions commonly associated with the onset of life threatening *weather hazards in a marine environment*.
- 3.4. Identify characteristics of life threatening weather hazards in a marine environment and their possible impact on recreational *marine activities*.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- planning and organising skills to:
 - collect weather and environmental information at regular intervals
 - record and interpret weather and environmental information
 - justify suitability and safety of an activity area
- problem-solving skills to:
 - determine the impact of meteorological data on planned activities
 - predict and anticipate weather for a specific marine environment
 - compare the differences between various weather attributes
- literacy and numeracy skills to:
 - interpret and analyse weather and environment information
 - record weather data patterns.

Required knowledge

- legislation and organisational policies and procedures to enable safe conduct of weather interpretation activities
- map types and symbols to predict weather for a specific marine area
- differences between general and marine forecasts to anticipate additional hazards and risks
- methods of predicting and forecasting weather to determine its impact on recreational marine activities
- influence of cloud types, local air masses, seasons, topography and landforms on the weather and the implications of these on marine activities
- methods of recording weather data to identify patterns and apply this information to plan safe marine activities
- life threatening marine weather hazards and their possible impact on recreational marine activities
- factors affecting global, regional and local climatic conditions and the impact of these on marine activities.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

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

Evidence of the following is essential:

- makes weather predictions for a marine area using weather maps and forecasts, and identifies the difference between general and marine forecasts
- assesses the short and long term implications of meteorological data on a specific marine activity.

Context of and specific resources for assessment

Assessment must ensure interpretation of weather signs in a variety of weather conditions in marine locations on multiple occasions to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- meteorological data to read and interpret
- a marine activity environment in which to conduct weather interpretation activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- oral or written questioning to assess knowledge of the impact of meteorological data on planned activities
- observation of interpreting weather for a specific marine environment using information gained from weather maps, predictions and forecasts
- portfolio of weather predictions covering five day periods
- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- Activity-specific units relevant to participation in aquatic outdoor recreation activities such as sea kayaking, surfing, personal water craft riding and SCUBA diving.

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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Map types*** may include:
- prognosis maps
 - analysis maps.
- Symbols*** may include:
- cyclones
 - anti-cyclones
 - depressions
 - highs
 - troughs
 - ridges
 - frontal bands
 - isobars.
- Conditions*** may include:
- cloud cover
 - wind direction, speed and strength
 - barometric pressure
 - precipitation type and intensity
 - wave direction and size
 - sunshine trends and duration
 - temperature range and intensity
 - humidity trends.
- Information*** may include:
- cloud cover
 - wind direction and speed
 - barometric pressure
 - precipitation type and intensity
 - wave size and form.
- Cloud types*** may include:
- cirrus
 - stratus
 - cumulus
 - nimbus.
- Data*** may include:
- cloud cover
 - wind direction and speed
 - barometric pressure
 - precipitation type and intensity
 - wave size and form.
- Patterns*** may include:
- wind direction and speed
 - precipitation form and distribution

- sunshine trends and duration
 - temperature range and intensity
 - humidity trends
 - anticyclones
 - depressions.
- Landforms*** may include:
- mountain ranges
 - large bodies of water
 - valleys
 - coastlines
 - islands.
- Limitations*** may include:
- duration of the activity
 - intensity of activity
 - exposure to prevailing conditions
 - proximity to land and or sheltered water
 - ability of individual and or group
 - type of craft and or activity.
- Relevant legislation*** may include:
- occupational health and safety
 - permits or permission for access
 - environmental regulations
 - marine regulations.
- Organisational policies and procedures*** may include:
- occupational health and safety
 - risk management
 - minimal impact environmental codes
 - code of ethics.
- Weather hazards in a marine environment*** may include:
- floods
 - cyclones
 - tidal waves
 - electrical storms
 - offshore winds, tides, currents.
- Marine activities*** may include:
- sea kayaking
 - surfing
 - surf kayaking
 - wind surfing
 - sailing
 - SCUBA diving
 - snorkelling
 - personal water craft riding
 - coastal land travel.

Unit Sector(s)

Outdoor Recreation

Competency Field

Field Operations