



**Australian Government**

# **MARH014 Apply weather information when navigating inland waters as Master**

**Release: 2**

# MARH014 Apply weather information when navigating inland waters as Master

## Modification History

**Release 2.** This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application
- Minor changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

**Release 1.** New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

## Application

This unit involves the skills and knowledge required to predict meteorological conditions and apply them to ensure the safe navigation of a vessel.

It includes interpreting and applying information obtained from observations, reports and instruments and forecasting weather for an intended inland waters passage using all available data.

This unit applies to those working in the capacity of a Master on commercial vessels up to 24 meters in length in inland waters.

### Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Master Inland Waters as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

## Pre-requisite Unit

Not Applicable.

## Competency Field

H – Navigation

## Unit Sector

Not Applicable.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Obtain weather information**

### PERFORMANCE CRITERIA

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

**1.1** Relevant weather forecasts are obtained from a range of sources and correctly interpreted

**1.2** Weather conditions are observed and correctly interpreted according to established nautical and meteorological practice

**1.3** Basic measurements of meteorological conditions are correctly made and recorded using established procedures

**1.4** Relevant meteorological charts, publications and related documentation are obtained, used, updated, stored and maintained

#### **2 Apply weather data to safe navigation**

**2.1** Weather condition hazards relevant to a proposed voyage are identified using relevant forecasts based on interpretation of meteorological observations, reports and measurements

**2.2** Voyage is modified as required to take into account weather and water condition hazards according to established navigational practice and operational instructions

#### **3 Maintain records of weather and oceanographic information**

**3.1** Meteorological measurements, observations, reports and forecasts are recorded and stored according to organisational procedures and regulatory requirements

**3.2** Actions taken to maintain safety of navigation and to minimise risk to safety of vessel as a result of weather and oceanographic forecasts, are documented according to organisational procedures

## 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.

## Unit Mapping Information

This unit replaces and is equivalent to MARH002 Apply weather information when navigating inland waters as Master.

## Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

# Assessment Requirements for MARH014 Apply weather information when navigating inland waters as Master

## Modification History

**Release 2.** This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application
- Minor changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

**Release 1.** New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

## Performance Evidence

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

- carrying out and interpreting weather observations
- completing required records and documentation
- reading, interpreting and applying weather information
- recognising problems that may occur when interpreting and applying weather information to navigation and taking appropriate actions
- selecting and using relevant instruments and equipment to measure meteorological conditions, including:
  - anemometers
  - barometers
  - thermometers
- using weather forecasts to ensure safe navigation.

## Knowledge Evidence

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

- basic principles of, and procedures for, interpreting meteorological information
- effects on navigation and vessel handling of wind, currents and bottom topography
- meteorological parameters:
  - air temperature
  - atmospheric pressure
  - cloud

- pressure gradient and isobar patterns
- relative humidity
- visibility (in conditions of fog, mist, rain and snow)
- wind direction
- wind strength
- principles of weather forecasting using information obtained from observations, reports and instruments including:
  - air masses and cold and warm fronts
  - cloud classifications
  - cyclones, storms and gales
  - heat exchange process
  - pressure systems
  - sources and interpretation of weather data
  - tropical meteorology
  - vertical division of the atmosphere
- procedures for applying forecast of likely weather and water conditions to the planning of a typical voyage
- procedures to be followed during gale conditions and cyclones, including the means of securing a vessel in a cyclone mooring.

## Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management system (SMS), workplace procedures and operational manuals, including:
  - notices and instructions of relevant maritime authorities
  - vessel log
  - weather reports, charts and satellite images

- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry, including instruments and equipment for measuring and observing the weather.

## Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>