



Australian Government

PUAFIR407 Interpret and analyse fire weather information

Release: 1

PUAFIR407 Interpret and analyse fire weather information

Modification History

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

Application

This unit of competency involves the skills and knowledge required to assess and interpret weather information in relation to its impact on fire behaviour. It includes collecting, interpreting, analysing and recording weather information.

The unit applies to personnel who are required to provide weather predictions as part of the planning undertaken for a fire.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

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

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Collect weather information

PERFORMANCE CRITERIA

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

1.1 Sources of weather information are identified and accessed

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| | 1.2 | Fire site information is sought from databases or experts |
| | 1.3 | General data is obtained |
| | 1.4 | Field observations are obtained and monitored |
| 2 Interpret weather information | 2.1 | Weather data is interpreted for current weather conditions in an area |
| | 2.2 | Bureau of Meteorology weather forecasts and warnings are interpreted for future weather conditions in an area |
| | 2.3 | Field weather observations are assessed |
| | 2.4 | Local weather influences likely to affect fire weather conditions are identified |
| | 2.5 | Weather forecasts are validated against field weather observations, as they become available |
| | 2.6 | Weather forecasts are evaluated for their effect on fire behaviour |
| 3 Analyse, record and communicate fire weather information | 3.1 | Analysis is conducted using weather data and forecast weather signs, local weather influences and likely impact on fire behaviour |
| | 3.2 | Quality information is provided within required timeframes for fire control planning |
| | 3.3 | Weather conditions are monitored and potential changes to fire predictions are assessed and reported |
| | 3.4 | Analysis and advice are provided to relevant personnel |

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 PUAFIR414 Interpret and analyse fire weather information.

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 PUAFIR407 Interpret and analyse fire weather information

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

- analysing, recording and communicating fire weather information and source data
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- collecting weather information by accessing recorded data, maps and web based products
- composing field observations
- interpreting topographic maps to assess effects on weather
- interpreting weather maps
- managing data and maintaining accurate records
- providing organisational personnel accurate analysis and projection of weather affecting an area and likely impact on fire behaviour

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

- effect of topography on weather and fire behaviour
- field observations including cloud type and cover, dew point, fire behaviour including rate of spread, flame height and spotting, fuel moisture content, temperature and relative humidity, wind speed, direction and gust and location and time of observation
- fire behaviour factors
- impact of weather on fire behaviour including size, growth and shape
- influences on weather
- observation, analysis and interpretation of weather signs
- organisational documentation, policies and procedures
- sources of data relating to weather and fire behaviour
- sources of weather information
- types of weather influence most likely to affect fire weather conditions including altitude and elevation, bodies of water, distance from coast, dry air subsidence inversion, Foehn winds, katabatic and anabatic winds, sea and land breezes, slope and aspect and wind channelling
- weather analysis including atmospheric stability, Bureau of Meteorology products and tools,

Haines index, smoke dispersion, temperature inversions, wind changes

- weather data including air temperature, dewpoint, relative humidity, synoptic charts, wind direction, speed and gusts, drought factor and drought index
- weather forecasts
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational 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
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - a range of sources for information related to weather conditions and fire behaviour and organisational templates for weather recording
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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