



Australian Government

FWPSIL2005 Measure trees

Release: 1

FWPSIL2005 Measure trees

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to measure trees, identify tree characteristics and abnormalities and record data on tree measurements, characteristics and abnormalities.

The unit applies to individuals who are involved in measuring trees as part of forestry operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Silviculture (SIL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for measuring trees	1.1 Determine job requirements from work order or instruction, and where required seek clarification from appropriate personnel 1.2 Confirm safety and environmental requirements, including use of personal protective equipment, for the task according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify, assess and take actions to mitigate risks and hazards associated with measuring trees 1.4 Identify emergency and evacuation procedures to follow in the event of an incident or accident 1.5 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.6 Select tools, measuring equipment and materials, and check for serviceability according to workplace procedures
2. Perform tree measurements and record data on tree measurements, characteristics and abnormalities	2.1 Locate forest or plot area from map or plan 2.2 Confirm tree measuring requirements including required measuring tools and equipment 2.3 Calculate stand height according to sampling technique 2.4 Measure log volume and length 2.5 Determine diameter and girth over or under bark at breast height and ground level 2.6 Classify stem form or crown class 2.7 Check and record tree measurements according to workplace procedures 2.8 Identify, assess and record tree abnormalities according to workplace procedures 2.9. Clean, maintain and store measuring tools equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interpret instructions that combine pictorial and written information on equipment, site plans and in workplace manuals when measuring and assessing trees
Writing	Record accurately and legibly tree measurements and factual information about tree abnormalities

Skill	Description
Oral communication	- Ask open and closed questions and use active listening techniques to clarify contents of work orders - Provide oral reports on tree measurements
Numeracy	- Use mathematical techniques to calculate stand height and measure dimension and volume of trees - Identify, estimate and measure common angles and shapes when measuring trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPSIL2005 Measure trees	FWPFGM2215 Measure trees	Updated Application Statement Reworded Elements Updated and added new Performance Criteria Updated Knowledge Evidence and Performance Evidence Updated Foundation Skills and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPSIL2005 Measure trees

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has measured, identified any abnormalities and recorded data on tree measurements, characteristics and abnormalities for five trees selected from one of the following types of trees:

- native trees
- plantation trees.

In undertaking this activity, the individual has:

- carried out the following tree measurements on five native or five plantation trees without causing damage to tree, environment, equipment or personnel:
 - stand height
 - log volume and length
 - diameter and girth (over or under bark at breast height or ground level)
- classified the stem form or crown class of five native or five plantation trees
- identified tree abnormalities in five native or five plantation trees, including:
 - butt swell
 - double leaders
 - heavy branching
 - ramiforms
- used and maintained appropriate measuring tools, including:
 - diameter tapes
 - length tapes
 - optical wedges
 - clinometers
 - digital measuring equipment
- recorded data on tree measurements, characteristics and abnormalities for five native or five plantation trees

- complied with environmental and safety standards, including use of personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose of measuring trees
- units of measurements used in tree measurements
- tree measuring techniques, including relevant mathematical calculations and basic trigonometry, including:
 - tolerances, allowances, calibration requirements and special procedures
 - tree diameter and girth (over or under bark at breast height or ground level)
 - tree height
 - log volume and length
- workplace procedures for measuring trees
- environmental risks and hazards associated with tree measurement
- species and characteristics of vegetation to be measured, including plantation and native forest trees
- tree abnormalities, including:
 - butt swell
 - double leaders
 - heavy branching
 - ramicorns
- types of measuring tools, and procedures for their safe use and maintenance, including:
 - diameter tapes
 - length tapes
 - optical wedges
 - clinometers
 - digital measuring equipment
- established communication channels and protocols
- procedures for recording and reporting tree measurements and abnormalities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - forest or plot area

- tools, equipment and materials used to measure trees
- PPE used in measuring trees
- specifications:
 - map or plan containing trees to be measured
 - workplace health, safety and environmental policies and procedures applicable to measuring trees
 - workplace procedures for measuring trees.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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