

Modification history

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

FWPFGM2XXX	Measure trees
Application	<p>This unit of competency describes the skills and knowledge required to measure trees, record tree measurement data and identify tree abnormalities.</p> <p>The unit applies to individuals who are involved in measuring trees as part of forestry operations.</p> <p>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.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Forest Growing and Management (FGM)

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 for the task according to workplace procedures 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. Measure and record tree measurements and abnormalities	2.1 Locate forest or plot area from map or plan 2.2 Confirm tree measuring requirements 2.3 Calculate stand height in line with 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.

Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions which combine pictorial and written information on equipment, site plans and in workplace manuals when measuring and assessing trees

Foundation Skills	
<i>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.</i>	
Skill	Description
Writing	<ul style="list-style-type: none"> Record accurately and legibly tree measurements and factual information about tree abnormalities
Oral communication	<ul style="list-style-type: none"> Ask open and closed questions and use active listening techniques to clarify contents of work orders Provide oral reports on tree measurements
Numeracy	<ul style="list-style-type: none"> 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
FWPFGM2XXX Measure trees	FWPFGM2215 Measure trees	Updated Application Statement Reworded Elements Updated and added new Performance Criteria Updated Knowledge and Performance Evidence Updated Foundation Skills and Assessment Conditions	Equivalent

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47
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TITLE	Assessment requirements for FWPFGM2XXX Measure trees
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that, on one occasion, the individual has:</p> <ul style="list-style-type: none"> • located forest or plot area from map or plan containing trees to be measured • carried out the following tree measuring procedures on native or plantation trees without causing damage to tree, environment, equipment or personnel: <ul style="list-style-type: none"> • calculated stand height in line with sampling technique • measured log volume and length • measured diameter and girth (over or under bark at breast height or ground level) • classified stem form or crown class • identified tree abnormalities, including: <ul style="list-style-type: none"> • butt swell • double leaders • heavy branching • ramicorns • used and maintained appropriate measuring tools including: <ul style="list-style-type: none"> • diameter tapes • length tapes • optical wedges • clinometers • digital measuring equipment • recorded tree measurements and abnormalities. 	
Knowledge Evidence	
<p>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:</p> <ul style="list-style-type: none"> • purpose of measuring trees • units of measurements used in tree measurements • tree measuring techniques, including relevant mathematical calculations and basic trigonometry including: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • butt swell • double leaders • heavy branching • ramicorns • types of measuring tools, and procedures for their safe use and maintenance, including: <ul style="list-style-type: none"> • 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	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • skills must be demonstrated in a forest work environment or an environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • forest or plot area • tools, equipment and materials used to measure trees • personal protective equipment used in measuring trees • specifications: <ul style="list-style-type: none"> • map or plan containing trees to be measured • access to workplace health, safety and environmental policies and procedures applicable to measuring trees • workplace procedures for measuring trees. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	<p>Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</p>