

Title	Collect and interpret forest inventory data		
Level	5	Credits	10

Purpose	People credited with this unit standard are able to: describe data collection methods for forest inventory; plan an inventory of a forest stand; collect data for an inventory of a forest stand; and interpret and process data for an inventory of a forest stand.
----------------	--

Classification	Forestry > Forest Mensuration
-----------------------	-------------------------------

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Definition
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
- 2 Reference to MARVL in this unit standard refers to the *Method of Assessing Recoverable Volume by Log Type*, a pre-harvest inventory method used to predict the yield of different log products in a forest stand.

Outcomes and performance criteria

Outcome 1

Describe data collection methods for forest inventory.

Performance criteria

- 1.1 Types of data collection methods are described in terms of management inventory and pre-harvest inventory.
- 1.2 Reasons for collecting inventory data are explained.

Range	planning, costing and scheduling operations, checking quality and value, determining wood volume and grade, valuation estimates.
-------	--
- 1.3 Types of sampling methods are described.

Range	simple random sampling, sampling with or without replacement, systematic sampling, stratified random sampling, double sampling, two stage sampling.
-------	---

Outcome 2

Plan an inventory of a forest stand.

Performance criteria

- 2.1 Forest inventory is defined in written format to meet organisational requirements.
- Range objectives, population size and strata, maps, plot shape, size and number, field procedures and equipment, log grades, measurement checking procedures.
- 2.2 The size of the sample in the inventory is calculated using formulae that meet organisational requirements.
- Range objectives, populations, probable limits of error (PLE), use of the results.
- 2.3 Plots to be included in the inventory are located and marked on a map.
- 2.4 Type of sampling to be used in the inventory is determined to meet organisational requirements.
- Range bounded plots, size and shape of bounded plots, angle gauge point or line plots, prism.
- 2.5 Planning considerations before establishing plots in the field are explained.
- Range random and unbiased selection of plot locations, management requirements for information to be collected, access to areas, resources required.

Outcome 3

Collect data for an inventory of a forest stand.

Performance criteria

- 3.1 Hazards associated with plotting are identified in terms of underfoot, overhead, and hindrance hazards, weather, and other forest operations.
- 3.2 Plots and sample points are located in the field using transect or grid lines in accordance with accepted industry practice.
- 3.3 Trees included in the plot are determined using an angle gauge or bounded plot criteria in accordance with accepted industry practice.
- 3.4 Field equipment is selected and calibrated to match plot type and organisational requirements.
- 3.5 Sampled trees match sample defined in inventory definition.

3.6 Plot is marked in the field to meet organisational requirements.

3.7 Data is collected to meet organisational requirements.

Outcome 4

Interpret and process data for an inventory of a forest stand.

Performance criteria

4.1 Stand information collected is interpreted and evaluated against the job prescription.

Range validity, stocking, condition and/or quality of stand, reliability.

4.2 MARVL data collected is processed and evaluated in accordance with accepted industry practice.

Planned review date	31 December 2022
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	5 December 2000	31 December 2017
Review	2	10 December 2015	N/A
Rollover and Revision	3	28 May 2020	N/A

Consent and Moderation Requirements (CMR) reference	0173
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.