

# **Pilot Assessment**

Content is Subject To Change Prior to Full Implementation



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## **Forest Products and Processing - Pilot**

Code: 3137 / Version: 01

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## *JOB READY ASSESSMENT BLUEPRINT*

### **FOREST PRODUCTS AND PROCESSING - PILOT**

**Test Code: 3137**

**Version: 1**

#### ***Specific Competencies and Skills Tested in this Assessment:***

##### **Safety**

Demonstrate understanding of Personal Protective Equipment (PPE) and Occupational Safety and Health Administration (OSHA) standards  
Demonstrate understanding of proper safety techniques when working at heights  
Understand best practices regarding the safe use of forestry machinery and equipment  
Understand and evaluate geographic and environmental factors related to safety

##### **Logging and Harvesting**

Demonstrate understanding of the proper techniques to fell and buck a tree  
Understand best practices regarding inspecting and studying harvest area  
Identify safe protocols for operating forest harvesting equipment and machinery  
Identify proper choker setter's technique

##### **Tree and Timber Processing**

Demonstrate understanding regarding scaling logs, identifying log scale, and explaining the relationship of log volume to lumber volume  
Demonstrate understanding regarding sizing and dimensioning rough-cut lumber and grading dimensional lumber  
Identify lumber defects, causes, and effects  
Identify alternative forest products for different geographical areas  
Identify equipment and machinery in a sawmill

##### **Chainsaws**

Identify parts of a chainsaw  
Demonstrate understanding of safe transportation, use, and operation of chainsaws  
Identify the different parts of a chain saw tooth and understand best practices regarding adjusting and sharpening  
Understand best practices regarding diagnosing and troubleshooting chainsaw problems

*Forest Products and Processing - PILOT (continued)*

**Forest Ecology, Silviculture, and Forest Management**

Identify common trees harvested in the forestry industry

Identify the steps involved in carrying out a forest inventory

Identify tree types using leaves, bark, and buds

Demonstrate understanding of forest management and its role in wildlife ecology and habitat maintenance

Understand the usage of prescribed fire in regards to sustaining tree communities

Identify tree diseases and pests and their impact on forest health

Understand the basic types of reforestation

Demonstrate knowledge of soil science and watershed management

Define silviculture and forest management terms and concepts relating to stand management

**Surveying**

Demonstrate understanding of strategies to navigate the forest safely

Demonstrate understanding regarding the proper use of measuring devices when calculating elevation and slope

Demonstrate understanding of how to use maps, GPS, compasses, and GIS to locate boundaries and topographical information

Calculate acreage using common forest/surveying measuring techniques

Identify the basic units of land measurement

**Timber Cruising**

Demonstrate knowledge of timber measurement tools and their usages

Demonstrate understanding of the techniques of timber cruising to determine stand volume

Demonstrate understanding of common forest measurement units

Demonstrate understanding of how the defects in a tree impact volume and/or grade

**Business Management and Employability Skills**

Demonstrate understanding of appropriate soft skills

Demonstrate understanding of appropriate communication skills

Demonstrate understanding of the timber market

Perform basic mathematic calculations

*Forest Products and Processing - PILOT (continued)*

***Written Assessment:***

Administration Time: 2 hours and 30 minutes

Number of Questions: 139

***Areas Covered:***

- 11% Safety
- 12% Logging and Harvesting
- 13% Tree and Timber Processing
- 9% Chainsaws
- 23% Forest Ecology, Silviculture, and Forest Management
- 11% Surveying
- 12% Timber Cruising
- 9% Business Management and Employability Skills

***Sample Questions:***

A diesel engine operator should add fuel and bleed fuel lines before restarting when the engine

- A. runs out of fuel
- B. overheats
- C. is due for an oil change
- D. is idling too long

Which activity requires clearing a 45-degree escape path as an approved protection measure?

- A. tree planting
- B. chainsaw maintenance
- C. timber felling
- D. log scaling

The measurement 4 feet by 8 feet typically represents a

- A. standard shipping crate
- B. full cord of wood
- C. pallet of lumber
- D. face cord of wood

***Forest Products and Processing - PILOT (continued)***

What does the chain brake on a chainsaw do during kickback?

- A. stops the chain
- B. prevents the throttle from engaging
- C. catches broken or dislodged chains
- D. shields the operator's hand from debris

What tree species are characteristic of the Pacific Northwest Forest region?

- A. Douglas-Fir, western hemlock, and western larch
- B. oak, hickory, and maple
- C. longleaf pine and loblolly pine
- D. yellow-poplar, chestnut oak, and red maple

Pesticides help control \_\_\_\_\_ in forests.

- A. wildlife migration
- B. soil erosion
- C. tree growth
- D. insect damage

What unit of linear measurement in forestry is equal to 66 feet?

- A. rod
- B. chain
- C. acre
- D. yard

What forestry measurement tool is typically placed at 4.5 feet above ground level to obtain standard readings?

- A. diameter tape
- B. clinometer
- C. increment borer
- D. wedge prism

***Forest Products and Processing - PILOT (continued)***

A “shake” is best classified as what type of defect?

- A. scalable defect
- B. surface blemish
- C. bark inclusion
- D. drying distortion

A fixed cost is a cost

- A. representing total revenue before deductions
- B. calculated after expenses are deducted
- C. that changes with production levels
- D. that remains constant regardless of business volume

*Forest Products and Processing - PILOT (continued)*

***Performance Assessment:***

Administration Time: 2 hours and 10 minutes

Number of Jobs: 5

***Areas Covered:***

15%      **Surveying and Compass Use**

*Participant will use a provided plat and compass to run the bearings of the plat. They will mark and flag boundary lines and corners.*

20%      **Timber Scaling and Volume Calculations**

*Participant will measure the small-end diameter of a log, identify the tree species, measure the log length, and use a log rule to determine the gross volume. They will identify and record any defects and calculate the net volume.*

12%      **Verbal Business Communications**

*Participant will review a common business scenario, prepare their notes, and make a "phone call" where they explain the situation and provide possible solutions.*

36%      **Forest Inventory - Point Sampling with Wedge Prism**

*Participant will conduct a forest inventory by using a compass, prism, clinometer, diameter tape, a limiting distances table, and a slope correction table to tally all "IN" trees. They will record the tree species, diameter at breast height (DBH), and merchantable height for all trees in their inventory, and will calculate the total basal area per acre.*

17%      **GPS Usage and Tree Identification**

*Participant will use a GPS to navigate to three designated points, where they will identify the tree species located at the coordinates.*

*Forest Products and Processing - PILOT (continued)*

**Sample Job:** Surveying and Compass Use

**Maximum** 30 minutes

**Job Time:**

**Participant Activity:** After seeing the first corner, the participant will use the provided plat and compass to run the bearings of the plat to locate the lines and corners of the property. The participant will mark the lines with a single flag, mark each corner with two flags, and notify the evaluator when they are finished.