

# FE 471/571

## HARVESTING MANAGEMENT

Lab 2: Ground Skidding Operational Planning and Field layout

Group Project Due Date:

### Objective

Apply information on ground-based harvesting assessment and operational planning to an in-field harvest unit layout. Prepare a harvest operations map and written information for implementation of the harvesting plan.

### Field Observations

- 1.) Complete a field reconnaissance over the harvest unit and record the following information (measurements and map locations) – terrain conditions, wet areas, steep slopes, timber stand conditions (tree species, DBH – range and average), and unit boundaries where directional felling is needed; suggested modifications should be included...
- 2.) Locate landings and spur roads (field location and map location). Measure the length and grade of each spur road.
- 3.) Plan a skidding pattern that is matched to the terrain and the other conditions that you assessed in your field reconnaissance. Sketch the skidding pattern on your harvest plan map. Choose an appropriate skidder (No Shovel Logging) based on the information gathered in the field.
- 4.) Layout (flag and traverse) one of the main skid trails; measure the external yarding distance and grade of the trail.

5.) Abide by Oregon Forest Practice Regulations and list all appropriate requirements.

6.) Randomly establish a 1/5<sup>th</sup> acre plot. Measure and record DBH of every tree in the plot. Measure tree height for one dominant tree. Note if snag, suppressed, intermediate, co-dominant, or dominant canopy class. Report average DBH, height of dominant tree measured, and estimated trees per acre in each class.

### **Group Report**

Prepare a report that summarizes your field observations, data collection, and harvesting plan (Written and operations map) in the following format:

**Introduction** – Explains the relevance of the topic (objective) and provides a brief background (lab date, location, landowner, etc...)

**Methods and Procedures** – Describes the process that you went through in gathering information (field reconnaissance, reference material, appropriate assumptions, etc...).

**Results and Discussion** – The main section of the report containing the information that you gathered to meet the lab objectives:

- Field reconnaissance data and observations including stand information.
- Selection of ground based equipment: description and justification, purchase price, estimated owning and operating costs, and estimated daily productivity (reference all sources of information).
- Description of your recommended landings, spur road locations, and skidding pattern (include all spur lengths and grades from field measurements).

- Description of harvesting contract requirements to meet all required regulations including soil protection and water quality objectives (felling pattern, wet areas, steep slopes, felling adjacent to boundaries, Forest Practice Regulations including post harvesting requirements, leave trees, etc..).
- Harvest Plan Map (clearly labeled) showing site conditions identified in the field reconnaissance, landings, spur roads, and skidding pattern (identifying trail that layed out and measured in the field).

**Conclusion** – A brief summary of the importance of your findings and harvest plan related to the lab and course objectives.

**Reference Publication:**

Andersson, B., and G. Young. 1998. Harvesting coastal second-growth forests: summary of harvesting system performance. FERIC technical report #TR-120. 37pgs.