

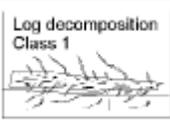
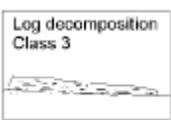
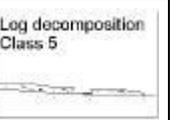
Coarse Woody Debris

Coarse Woody Debris (CWD): sound and rotting logs and stumps that provide habitat for plants, animals, and insects and a source of nutrients for soil development.

The coarse woody debris component of the photo fuel plots has generated interest from the regional and district offices of the Ministry of Forests, Lands and Natural Resources. A rating system is being developed which will be added to the photo fuel plots in the future. This rating system can be used by land managers and ministry staff to help define acceptable amounts of coarse woody debris.

The coarse woody debris sampling method used for the photo fuel plots, approved by Andre Arsenault, plant biologist, from Kamloops Forest Region, is the line transect method.

- The sample is based on a 30m line
- The CWD greater than 7.1 cm is measured where the line transects the center of the piece.
- The diameter is taken perpendicular to the centre line of the CWD at the point where the transect crosses the CWD (see figure 1).
- The angle between the central axis of the CWD and the horizontal plane at the crossing point is the tilt angle (see figure 2).
- The decay class is determined according to the decay classes listed in the Vegetation Resource Inventory Ground Sampling Procedures.

<i>Vegetation Resource Inventory Ground Sampling Procedures March 1997 Table 8.1</i>					
					
	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
WOOD TEXTURE	intact, hard	intact, hard to partly decaying	hard, large pieces, partly decaying	small, blocky pieces	many small pieces, soft portions
Other associated characteristics					
PORTION ON GROUND	elevated on support points	elevated but sagging slightly	sagging near ground, or broken	all of log on ground, sinking	all of log on ground, partly sunken
TWIGS < 3 cm (if originally present)	twigs present	no twigs	no twigs	no twigs	no twigs
BARK	bark intact	intact or partly missing	trace bark	no bark	no bark
SHAPE	round	round	round	round to oval	oval
INVADING ROOTS	none	none	in sapwood	in heartwood	in heartwood

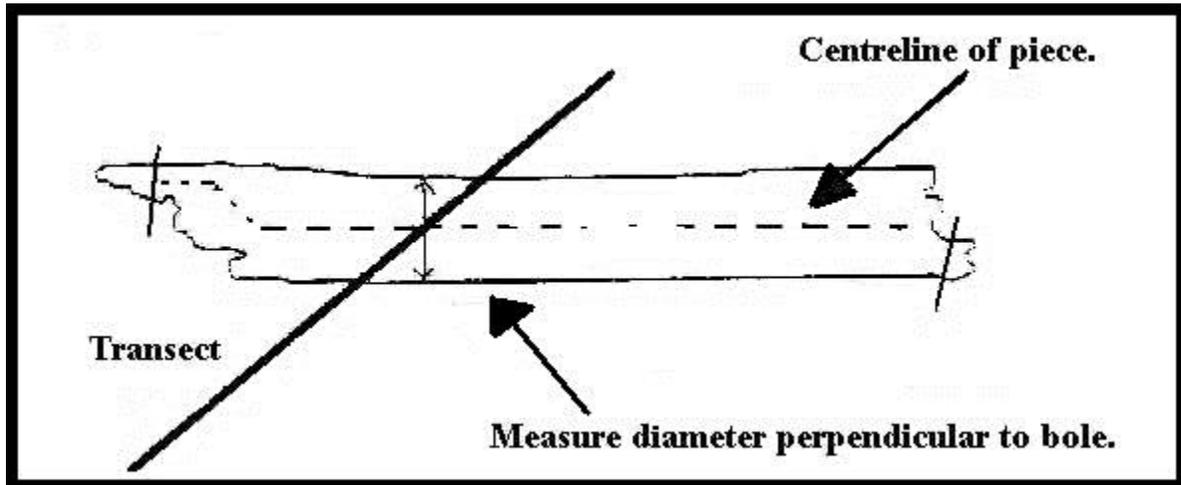


Figure 1. The diameter is measured perpendicular to the bole of the CWD at the point where the transect crosses the CWD.

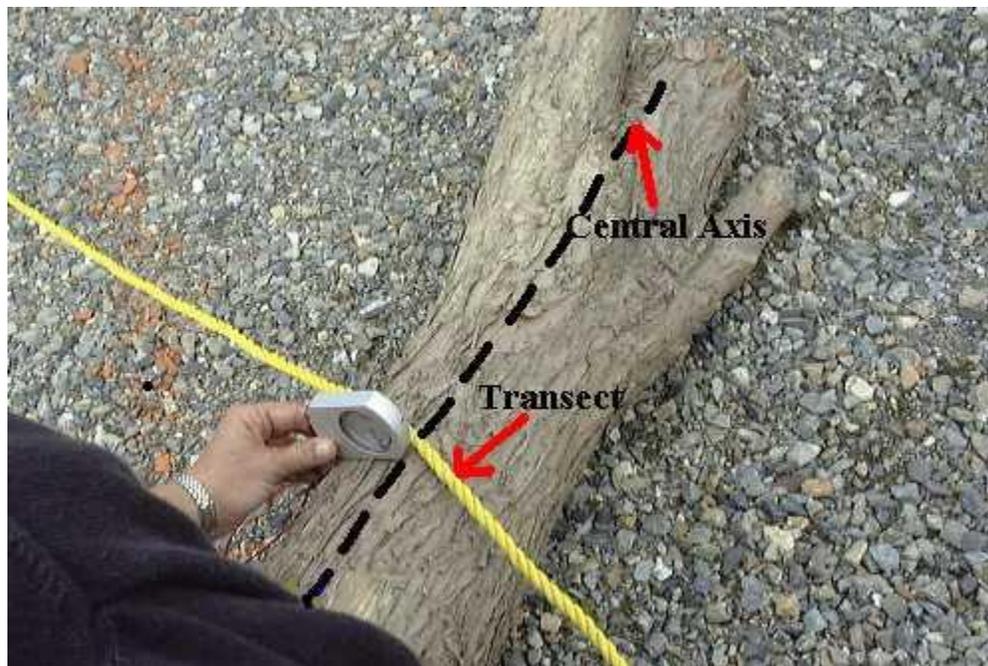


Figure 2. The clinometer is used to measure the angle the CWD makes from the horizontal.

Fine Fuels

The fine fuel measurements are based on the method described in the *FRDA 100 handbook, Field handbook for the Prescribed Fire Assessments in British Columbia: Logging Slash Fuels*.

The lines of the triangle are flagged at 5-m intervals. All twigs, branches, and small stems less than 7.1 cm in diameter that transect the line are counted. The following size classes and the length of the line required for measurements are recorded below:

<u>Diameter Size class</u>	<u>Portion of sample Line Tallied</u>
0-0.5	0-5 metres
0.6-1.0	0-10 metres
1.1-3.0	0-15 metres
3.1-5.0	0-20 metres
5.1-7.0	0-30 metres

The diameter of the piece at the actual point of intersection along the line will determine the size class of the piece. The use of a go-no-go gauge (see Figure 3) will aid in the determination of the different size classes.

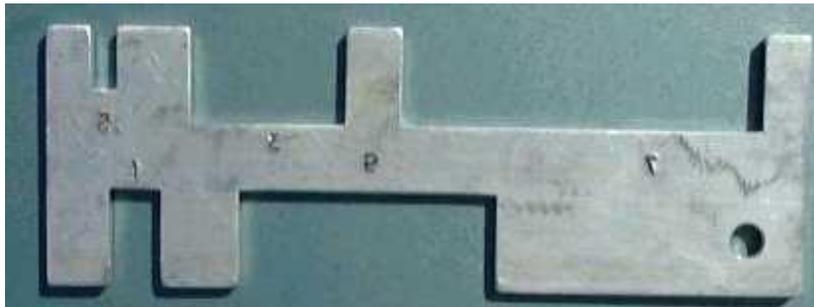


Figure 3. Go-No-Go Gauge.

Once the data is gathered and recorded, the information is entered in the *Coarse Woody Debris Fuel Calculator* developed by Ember Research Service Ltd. in Victoria, B.C. The program calculates both volumes and tonnages for coarse woody debris and fine fuels.