

**A3.1 Plot
re-establishment
and residual tree
measurements**

Research Branch staff conducted post-treatment plot measurements in July 2005 as harvesting treatments were completed in each operational block. Plot centres in harvested plots were found or re-established according to procedures described.

Tree numbering

Trees were tagged and measured by sectors, which were determined by dividing the plot into four along the cardinal directions. Sector 1 was always in the northeast and numbering was sequential in a clockwise direction. All trees 4 cm or larger were tagged and measured in the 5.7-m plot, trees greater than 15 cm in the 12.6-m plot, and trees greater than 25 cm in the 17.8-m plot. Trees were tagged at breast height, facing plot centre. Tree tag numbers started from 1 for each plot. Small, thin-barked trees had tags attached with barlocks and staples. Dead trees and large, live trees with sufficiently thick bark and snags were tagged with aluminum nails. Dead trees less than 25 cm or less than 2.5 m in height were ignored. Trees were measured for dbh and assessed by codes for crown class, tree class, damage, etc. as listed below in the coding. All data were recorded electronically using EASYDC software licensed to Research Branch.

Site Tree selection

Tree heights were measured by staff in the fall of 2006 after plots had been re-established and tree diameters and condition codes were taken. The site tree, defined as the largest Douglas-fir tree in a 0.01-ha plot, was measured for height if suitable. Suitability was met if the tree was a dominant or codominant, not a wolf or veteran or open-grown tree, with a straight stem free of disease, damage, or breakage, free of suppression above breast height, not repressed and vigorous, and with a full crown. If a suitable site tree could not be found on the inner 5.7 m radius plot, then the 12.6 m radius plot was subdivided into five sectors and a suitable tree was chosen within the newly defined 0.01-ha plot in the northeast sector. If this approach was still unsuccessful, the sectors were sequentially scanned until a suitable tree was found.

Tree height and height to base of live crown

All Douglas-fir trees larger than 25 cm were measured for height and height to base of live crown. Where crown base was uneven, an average was used. Height and height to live crown of species other than Douglas-fir were subsampled. For western hemlock and western redcedar, one tree was randomly selected for each of the three diameter classes (4–15 cm, 15.1–25 cm, and > 25 cm). For other species, such as Sitka spruce, bigleaf maple, and grand fir, one tree was randomly selected across all diameter classes. Dead trees greater than 25 cm were assessed for height to break, condition, etc. as listed in the coding below.

Tree harvest damage

Tree harvest damage data were collected for each tree with visible damage. Measurements included tree number, species, dbh, type of stem damage (surface scuffed or bruised, phloem exposed, wood gouged < 1 cm deep, wood gouged > 1 cm deep, tree stem damaged at the ground), cause of stem damage (yarding, falling, windthrow), width of damage, diameter of tree at point of