FRCS Assumptions

Other Assumptions

$$MaxManualTreeVol, ft3 = 150 \quad (1)$$

$$MaxMechTreeVol, ft3 = 80 \quad (2)$$

$$MoistureContentFraction, wet\ basis = 0.50 \quad (3)$$

$$LogLength, ft = 32 \quad (4)$$

$$LoadWeight, green\ tons\ (logs) = 25 \quad (5)$$

$$LoadWeight, green\ tons\ (chips) = 25 \quad (6)$$

$$CTLTrailSpacing, ft = 50 \quad (7)$$

$$HardwoodCostPremium, fraction = 0.20 \quad (8)$$

$$ResidueRecoveryFraction\ for\ WT\ systems = 0.80 \quad (9)$$

$$ResidueRecoveryFraction\ for\ CTL = 0.50 \quad (10)$$

$$AvgTreeSizeLimit4Chipping = 80 \quad (11)$$

$$AvgTreeSizeLimit4Processing = 80 \quad (12)$$

$$AvgTreeSizeLimit4ManualFellLimbBuck = 250 \quad (13)$$

$$AvgTreeSizeLimit4loading = 250 \quad (14)$$

$$AvgTreeSize4GrappleSkiddingOfBunchedTrees = 250 \quad (15)$$

Tree Volume

Chip Trees <= 80 ft3

Small Log Trees <= 80 ft3

Large Log Trees > 80 ft3

Wood Density

For chip trees, small log trees or large log trees, if the wood density is not specified by a user, it is assumed as 50 lb/ft3.

Hardwood fraction

For chip trees, small log trees or large log trees, if the hardwood fraction is not specified by a user, then it is assumed as 0.

Logs Per Tree

Logs per chip tree was assumed as 1.

Limits

Limits		Ground-Based				Cable				Helicopter	
		Mech WT	CTL	Manual WT	Manual Log	Manual WT/Log	Manual WT	Manual Log	CTL	Manual WT	CTL
TreeVol maximums, ft3:	CT	80	80	80	80	80	80	80	80	80	80
	SLT	80	80	80			80		80		80
	LLT	250	100	500			500		100		100
	ALT	250		500	250	250	500	250		250	
	all trees	250		500	250	250	500	250		250	
Maximum LLT/ac		none	10	none	none	none	none	none	10	none	10
Maximum LLT as % of ALT		none	10	none	none	none	none	none	10	none	10
Maximum Slope, %		40	40	40	40	100	100	100	40	100	40
Maximum Yarding Dist, ft		none	none	none	none	1300	1300	1300	1300	10000	10000