

**Fairhaven Highlands-Bellingham, Washington**  
**Tree Ring Analysis for Wetlands CC, KK JJ**  
**February 2009**

Tree Ring Analysis (resulting from tree cores) - Fairhaven Highlands (performed by Jim Barborinas, arborist)

2/13/2009	species	dbh	Length of core	of rings counted	Plus 3 to core height	to condition of core	notes
t-1	w. red cedar	21.2	11"	> 70(78)	81	good	at edge of wetland - roots may be in wetland
t-2	w. red cedar	13.6	7"	>80(83)	86	good	interior of wetland
t-3	sitka spruce	15.7	8"	80(81)	84	good	interior of wetland
t-4	sitka spruce	20.4	10"	>80(83)	86	good	interior of wetland
t-5	western hemlock	18.4	4"	50(76)	79	poor	ring count from outer 4" so very probable missing growth rings.
2/18/2009							
t-6	w. red cedar	22.6	9"	65 (65)	68	poor	rotted core so additional growth rings likely
t-7	w. red cedar	11.1	7"	52(52)	55	poor	rotted core so additional growth rings likely
t-8	paper birch	17.7	7"	no count		poor	Poor ring delineation-estimated 65 plus from what was visible
t-9	black cottonwood	15.6	8"	40(40)	43	good	
t-10	western hemlock	14.9	6"	50(40)	43	good	Poor ring delineation-estimated 40 rings at best
t-11	w. red cedar	15.7	7"	75(73)	76	good	Possibly more growth rings because borer did not hit center
t-12	w. red cedar	12	6"	70(74)	77	good	
t-13	douglas fir	24.7	11.25"	70(83)	86	good	at edge of wetland, but upland
t-14	w. red cedar	11.2	5.5"	47(52)	55	good	many trees cored, but most had poor cores and were discarded

Notes: (1) Three years are added to each growth ring count to account for the approximate number of years it took the tree to grow to the height of the core.  
(2) Numbers and words in green are growth rings counted in office with magnifying glass submitted after field work.